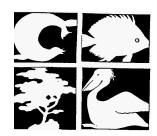
ISCAS '98



The 1998 IEEE International Symposium on Circuits and Systems



Advance Program
May 31 - June 3, 1998
Monterey Conference Center
Monterey, CA





For the latest information, please check out the website at: http://www.iscas.nps.navy.mil

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Welcome to ISCAS' 98 and Monterey

On behalf of the Organizing Committee, it is our pleasure to invite and welcome you to the 1998 IEEE International Symposium on Circuit and Systems (ISCAS'98), to be held in the beautiful and historic city of Monterey, California. The 1998 ISCAS, sponsored by the IEEE Circuits and Systems Society and hosted by the Naval Postgraduate School of Monterey, CA, will be held at the Monterey Conference Center in conjunction with the Monterey Marriott and Doubletree Hotels, from May 31 through June 3, 1998.

The technical program this year consists of 97 sessions that cover a broad range of technical subjects. Among these are 16 Special Invited Sessions that have been organized and selected to bring you the most current thinking and research results in the field. Two panel discussions on Education and Government sponsored research, along with three plenary presentations are also planned. In addition to the regular technical program, 13 specially organized short courses are scheduled on Sunday, May 31, preceding the start of the regular program.

A number of social events are planned throughout the conference, including a Welcoming Reception on Sunday evening, a conference reception and concert at the Naval Postgraduate School on Monday evening, and a Banquet at the Monterey Bay Aquarium on Tuesday evening. Additionally, spouse and dependent activities are also organized which include a bus tour of Monterey, Pebble Beach, Carmel, Big Sur and a wine tasting tour to Carmel Valley.

The conference is an excellent opportunity for researchers to meet in a relaxing and stimulating environment. Apart from the beauty of its coastline, the Monterey Peninsula, situated in central California (2 hours south of San Francisco), is the habitat of a rich wildlife. Sea otters, sea lions and migrating whales can be seen in their natural settings.

The Monterey Conference Center with the Monterey Marriott and Doubletree Hotels, the venue of ISCAS'98, are located in downtown Monterey a few minutes walk from the Fisherman's Wharf and Cannery Row with their numerous restaurants, the beach and the main attractions of Monterey. Other close attractions like the 17 mile drive with its world famous Pebble Beach golf courses and Carmel-by-the-Sea with its European style boutiques, are within a short drive. They will conspire to pull you away from the Symposium, but you will heroically resist.....most of the time.

We sincerely hope you enjoy your visit to Monterey, and you will remember both the technical and social aspects of ISCAS' 98 as a pleasant and worthwhile experience.

Sherif Michael General Chairman ISCAS '98 Stanley A. White General Co-Chairman ISCAS '98

Message from Technical Program Co-Chairs

On behalf of the Technical Program Committee, it is our pleasure to introduce the Technical Program for ISCAS'98. This program represents the integrated efforts of many individuals, namely, the authors, special session organizers, reviewers, and the Technical Program Committee. The entire review process was carried out on-line and a significant fraction of the papers were provided in publish ready Adobe Acrobat Portable Document Files (pdf).

We received over 1200 papers from various parts of the globe. In selecting papers, the Technical Program Committee had the excruciatingly difficult task of selecting among many papers of near equivalent quality. It is tempting to draw the conclusion that if a paper was not accepted, it must have been judged a poor or unqualified paper. Although there were such papers submitted, many of the papers that we could not fit into the ISCAS'98 technical program were fine papers.

The Technical Program is comprised of 779 contributed and 140 special session papers. There are three Plenary Talks, two Panel Discussions, 18 Special Sessions and 79 Regular Sessions. With the exception of the plenary session, there will be over 15 parallel sessions each morning or afternoon. About 43% of the papers will be presented in Poster Sessions which have the advantage of allowing attendees to meet the authors personally and to discuss their papers in depth. The Technical Program Committee made no quality differentiation in selecting papers for poster and oral sessions. Papers were assigned with the sole purpose of forming coherent sessions.

We would like to take this opportunity to thank all authors who submitted papers, the reviewers, the Track Chairs, the Members of Technical Program Committee, the Special Sessions Chair, and the special session organizers; they all have contributed mightily to the success of the Technical Program for ISCAS'98.

Kenneth R. Laker and Murali Tummala Technical Program Co-Chairs ISCAS '98

ISCAS '98 COMMITTEE CHAIRS

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De Otto Local Milita

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Publicity Chair

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Short Courses Co-Chair

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Registration Co-Chairs

Professor John Ciezki and Professor Robert Ashton Naval Postgraduate School register@iscas.nps.navy.mil

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South and Central America Chair

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Far East Chair

Professor Yong Ching Lim National University of Singapore elelimyc@leonis.nus.sg

Conference Schedule at a Glance

Saturday, May 30, 1998

6:00 PM - 9:00 PM Tutorial Registration and

Reception

Sunday, May 31, 1998

7:30 AM – 5:00 PM Conference Registration

8:00 AM - 12:00 PM Tutorial Morning

Session

1:00 PM - 5:00 PM Tutorial Afternoon

Session

6:00 PM - 9:00 PM Presymposium

Reception

Exhibitors of ISCAS will host a reception at the Monterey Conference Center.

Monday, June 1, 1998

7:30 AM – 5:30 PM Conference Registration

8:00 AM Opening of

Conference

8:05 AM - 8:45 AM Keynote

Speaker

9:00 AM - 12:30 PM Morning Technical Sessions

2:00 PM - 5:30 PM Afternoon Technical

Sessions

6:00 PM - 9:30 PM Award and Social

Reception

 $6{:}00\ PM$ - $7{:}15\ PM$ - $\ Social\ Reception,$ the Ballroom at the

Naval Postgraduate School

7:30 PM - 8:05 PM - Awards Ceremony, Auditorium at the Naval Postgraduate School

8:05 PM - 8:15 PM - "A Farewell to Dr. Richard Hamming"

8:30 PM - 9:30 PM - .Monterey Symphony Concert,

Auditorium at the Naval Postgraduate School

Tuesday, June 2, 1998

7:30 AM – 5:30 PM Conference Registration

8:05 AM - 8:45 AM Plenary Speaker

Dr. Robert Trew - Department of Defense, Office of the Director, Defense Research and Engineering

Title: To Be Announced

9:00 AM - 12:30 PM Morning Technical Sessions

2:00 PM - 5:30 PM AfternoonTechnical

Sessions

4:00 PM - 5:30 PM Panel

Discussion

Government Research

Funding

Circuits and Systems

Education

7:00 PM - 11:00 PM - Symposium Banquet at the Monterey Bay Aquarium

Monterey Aquarium, 1 Cannery Row, Monterey

The symposium participants will be hosted by the world renowned Monterey Aquarium to a private party featuring a superb array of music, dining and of course sea creatures.

Wednesday, June 3, 1998

7:30 AM – 5:30 PM Conference Registration

8:05 AM - 8:45 AM Plenary Speaker

Dr. Hector Ruiz, Executive Vice-President, Motorola, Inc. Office of the President, Semiconductor Product Sector.

9:00 AM - 12:30 PM Morning Technical Sessions

2:00 PM - 5:30 PM AfternoonTechnical

Sessions

End of Conference

Special Invited Talks and Panels

Monday Plenary

Monterey Conference Center,

8:05 AM-8:45 AM

Mr. Jack Harding - President and CEO, Cadence Design Systems, Inc.

Prior to his appointment as President and CEO in October 1997, Jack Harding served as Senior Vice President of Cadence's Strategic Business Group, responsible for overseeing all the company's business units. While these individual units are responsible for product development and marketing, Mr. Harding was charged with guiding the direction and activities of these business units into a cohesive, integrated offering to Cadence's customers. The business units that reported to Mr. Harding were: Alta/High Level design, Custom IC, Deep Submicron, Logic Verification and Performance Engineering.

Recently, he was named to the Council on Competitiveness in Washington, DC, a non-partisan organization of chief executives from industry, labor and academia, working together to set a national agenda to strengthen US competitiveness.

Tuesday Plenary

Monterey Conference Center,

8:05 AM-8:45 AM

Dr. Robert Trew - Department of Defense, Office of the Director, Defense Research and Engineering

Robert J. Trew was appointed Director for Research, Office of the Director, Defense Research and Engineering, effective August 17, 1997. He is responsible for providing scientific leadership, management oversight, policy guidance and coordination of the \$1.2 billion annual basic research programs of the Military Services and Defense Agencies. In this capacity, Dr. Trew has cognizance over the complete spectrum of efforts in research including physics, materials, chemistry, biology, electrical engineering and electronics, computer engineering and science, mathematics, environmental sciences and aerospace. In addition, he is

responsible for science, mathematics and engineering education, policy for grants, cooperative agreements and executing the University Research Initiatives and other research efforts administered by the Office of the Secretary of Defense.

He was the Editor of the IEEE *Transactions on Microwave Theory and Techniques* from 1995 to 1997. He has also served as Guest Editor for the *Materials Research Society Bulletin*, and *the International Journal of Microwave and Millimeter-Wave Computer-Aided Engineering*. Dr. Trew is a Fellow of the IEEE. He received the 1992 Alcoa Foundation Distinguished Engineering Research Award.

Panel Discussion Sessions

Monterey Conference Center, 4:00PM - 5:30PM

A. Government Research Funding

A panel discussion will be held on the aspects of future direction of research funding. Various members from all of the major research funding organizations will present their understanding of their organization's direction and then the panel will discuss topics provided by the attendees.

B. Teaching of Circuits and Systems, Electronics and Signal Processing in the 21st Century

A panel discussion will be held on the future of education in circuits and systems. Various members of the academic community, will present and discuss their views.

Wednesday Plenary

Monterey Conference Center,

8:05 AM-8:45 AM

Dr. Hector Ruiz, Executive Vice-President, Motorola, Inc. Office of the President, Semiconductor Product Sector

Receptions and Social Events

Tutorial Reception

Saturday, May 30, 1998 9:00PM

6:00PM -

Presymposium Reception

Sunday, May 31, 1998

6:00PM -

9:00PM

Award and Social Reception at the Naval Postgraduate School

Monday, June 1, 1998 9:30PM 6:00PM -

A social reception will be held Monday evening at the Barbara McNitt Ballroom in Hermann Hall on the Naval Postgraduate School (NPS) campus. The campus is located one mile east of the Monterey Conference Center.

The reception will be held in the historic Del Monte Hotel (now named after Rear Adm. Ernest Edward Herrmann, first superintendent of NPS) build originally in 1881. The Del Monte was a famous resort owned by the railroad barons of the Southern Pacific and later by Samuel Morse's nephew, until the U.S. Navy purchased the property in 1949 for the Postgraduate School. This ballroom has entertained such dignitaries as Greta Garbo, Johnny Weismuller, Presidents Ulysses S. Grant and Theodore Roosevelt.

Hors d'oeuvres and refreshments will be served until 7:30 PM. The activities will then continue in the King Hall Auditorium on the NPS campus for the Awards ceremony. At 8:30 PM, the Monterey Symphony Orchestra will provide a special concert until 9:30 PM.

Banquet at the Monterey Bay Aquarium

Tuesday, June 2, 1998

7:00 PM - 11:00PM

The Monterey Bay Aquarium will host a special evening of wine, refreshments, music and appetizing food for ISCAS attendees.

The aquarium (www.mbayaq.org) is at the heart of the nation's largest marine sanctuary. More than a hundred galleries and exhibits re-create the bay's many habitats, from shallow tide pools to the vast open ocean. The exhibits include a million-gallon indoor ocean, viewed through the largest window on Earth, a towering three-story kelp forest, and jewel-box exhibits that reveal the delicate beauty of smaller sea creatures. You'll be eye-to-eye with more than 350,000 strange and colorful creatures that live in the Monterey Bay, from playful sea otters and delicate jellies to powerful sharks, elusive octopus and giant ocean sunfish. You can stroke the rough skin of an ochre star or the velvety back of a bat ray. You can also turn a telescope toward a

sea otter in the kelp beds offshore or a microscope on dancing plankton. Videos, special programs and a host of hands-on activities bring the entire family closer to sea life than ever before.

Organized Tours

Three tours are planned for the attendees of ISCAS 98 by Otter Tours & Charters. Room is available for 46 participants on each tour. Please note, if there are insufficient sign-ups for a particular tour, the tour may be canceled. So please enroll early so you don't miss on these valued tours.

Point Lobos/Big Sur Tour - Monday, 1 June

Price: \$50.00 per person before 11 May/ \$65.00 after May 11 Make sure you bring your camera and film for this one. The tour departs 9:30 AM on Monday June 1, 1998, from the Doubletree Hotel. You will visit Point Lobos, the "Crowned Jewel of California's State Parks", what Francis McComas called the "Finest Meeting of Land and Water in the World". You'll enjoy a gentle nature walk learning the history, flora and fauna. Following Point Lobos, you'll continue down the scenic Pacific Coast Highway viewing some of the most spectacular views in North America. Once in famous Big Sur, you'll visit the world renowned Ventana Inn where you can have lunch while viewing breathtaking scenery. (Note: Lunch expense is not provided in Point Lobos/Big Sur tour cost). After lunch, you'll continue your tour of Big Sur shops and sites and return to the Doubletree by 3:00 PM.

Steinbeck/Wine Tasting Tour – Tuesday, 2 June

Price: \$65.00 per person before 11 May/ \$80.00 after May 11 This will be a treat for your palate, a wine and food tour of what makes Monterey county world famous agriculturally. The tour departs 9:15 AM on Tuesday June 2, 1998, from the Doubletree Hotel. You will first visit the Chateau Julien Vineyards, where you may taste the fruits of their vines. The Monterey region is renowned for world-class Chardonnays and White Rieslings. Following the Chateau Julien vineyard tour, you'll arrive for a private lunch at the Steinbeck House in Salinas. The childhood home of John Steinbeck is where he immortalized East of Eden in the center of Salinas Valley agriculture. Following the lunch, you'll arrive at Monterey Vineyards in Gonzales for more wine tasting (check out their Riesling). You'll return to the Doubletree by 3:30 PM.

Carmel/Monterey Shopping Tour - Wednesday, 3 June

Price: \$45.00 per person before 11 May/ \$60.00 after 11 May Have your shopping shoes in shape! The tour departs at 9:00 AM on Wednesday June 3, 1998, from the Doubletree Hotel. You will tour the historic landmarks of the Peninsula. Your tour guide will show you the Indian burial grounds, adobes, early Monterey landmarks, Colton Hall, Robert Lewis Stevenson House, the Old Custom House, Fisherman's Wharf, Cannery Row, Pacific Grove, Asilomar, Pebble Beach's 17 Mile Drive, Carmel and the Carmel Mission. At noon, the tour bus will allow you to "shop 'til you drop" in the Carmel shopping district. Stop by Clint Eastwood's Hog's Breath Inn and "Make your day!" If you're still standing, the bus will return you at the Doubletree by 3:00 PM.

General Information

Location

Monterey (www.monterey.com) is located 100 miles south of San Francisco and 330 miles north of Los Angeles, on the southern edge of Monterey Bay. The locality is rich in history, wildlife and recreation. Since Commodore Sloat took the city without a shot in 1846 during the Mexican War, Monterey was the first capital of California until the Gold Rush of 1849. The quiet seaside resort became the center of the sardine industry in the early 1900's as brought to life by Steinbeck's novel Cannery Row. Today, the "Peninsula" has gone from making a living from the sea to being the foremost to protect sea life. The Monterey Bay Marine Preserve is home to countless marine animals, sea lions, otters, whales and dolphins. The Monterey Bay Aquarium, center of Monterey Bay Aquarium Institute (MBARI), provides young and old, hands-on and close up views of our aquatic friends. Early June should provide many photo opportunities of sea lions and otters along the coastline. Because of the natural beauty and rich habitat, thousands come to Monterey to enjoy many activities by the sea, such as scuba diving, sailing, salmon fishing, boating, ocean kayaking. Landlubbers can easily be kept occupied with golfing on 17 world class courses, biking along many of Monterey's bike trails, walking the white sand beaches of Carmel Bay, short jaunts at Point Lobos, Big Sur or Jack's Peak. Another popular sport on the Peninsula is shopping. All types of shop experiences exist, from the outlet stores of Cannery Row to the unique European boutiques of Carmel. Finally, attendees will have multiple choices of some of the best restaurants in the world.

For more ideas see Local Attractions.

Getting to Monterey

Airlines

Two airlines and two car rental agencies will provide reduced rates to ISCAS '98 attendees and their families. Discount fares are available for flight destinations by both carriers at:

- 1.) Monterey Peninsula Airport, 3 miles from conference,
- 2.) San Jose International Airport, 70 miles from conference,
- 3.) San Francisco Int. Airport, 100 miles from conference,
- 4.) Oakland International Airport, 100 miles from conference.

 Direct flights to Monterey exist between San Francisco and Los Angeles.

United Airlines

United Airlines is offering a 10% discount off the unrestricted mid-week coach fare or 5% discount off any published airfare from First Class to the lowest applicable discount to all attendees of the IEEE ISCAS '98. United Airlines is also pleased to offer an additional 5% discount towards the purchase of tickets purchased at least 60 days in advance of travel. This special offer applies to travel on domestic segments of all United Airlines, United Express and Shuttle by United flights. United Airline's convenient schedule and discounted fares are available through their Meeting Desk. Call 1-800-521-4041 and reference Meeting ID Code 570IX. Dedicated reservation personnel are on duty seven days a week from 7:00 AM to 12:00 Midnight EST.

Car rental discounts of 10% with Avis and Alamo car companies are offered through reservations with United. Please use meeting discount #389817 and rate code GR with Alamo. For Avis, please refer to AWD# K019303.

American Airlines

American Airlines is providing 5-10% off of applicable fares, and 10%-15% on fares reserved <u>before 60</u> days. Please identify for your discount with number **AN# 1558UJ** when calling **1-800-433-1790** to make reservations. In conjunction with American, Avis Car Rental will provide discounts with

the reference number AWD# B136000.

Train

Amtrak provides train service to Salinas, CA, and bus service to Monterey (12 miles). Trains are available from Northern and Southern California. Please contact Amtrak for more information at **1-800-USA-RAIL** (872-7245) or **www.amtrak.com**. For groups of 20 or more, please call **1-800-872-1477**.

Local Transportation

Local transportation to and from your airport destination and the conference location can be provided by:

Car Rentals in Monterey

Alamo (San Jose) 1-800-327-9633/www.goalamo.com Avis 1-800-831-2847/www.avis.com

Budget 1-800-527-0700/www.budgetrentacar.com Enterprise 1-800-73682227/www.pickenterprise.com

Hertz 1-800-654-3131/www.hertz.com National 1-800-227-7368/www.nationalcar.com

Taxi

Yellow Cab	646-1234
Carmel Yellow Cab	626-3333

Limousine

A-1 Chartered Limousines Inc.	899-2707
Cypress West Sedan & Van Service	626-1234
Tom's Livery Service	626-8119

Airport Shuttle Services

Monterey/Salinas Airbus 1-800-291-2877
The Airbus provides transportation between San Francisco, San Jose and Monterey airports. Advance reservations recommended.

San Jose to Monterey - Fares: 1 person - \$ 30.00; 2 people - 54.00; 3 people - 70.00. Shuttles pick up in SJC Terminal A across from the baggage claim to the right, departure side, at the County Transit Bus Stop. In Terminal C, shuttles pick up outside baggage claim to the left at the County Transit Bus Stop. Daily departures from San Jose Airport to Monterey and Salinas are scheduled for 10:30 AM, 1:30 PM, 4:30 PM,

7:00 PM, and 9:30 PM.

San Francisco to Monterey - Fares: 1 person - \$ 35.00; 2 people - 58.00; 3 people - 70.00. At the Airport, pick up your shuttle on the lower level (baggage claim area) of any terminal, near the blue column on the center island. One way fare is \$35.00, round trip \$60.00. Discount for parties of 2 or more. 1-day return and group rates are available. Buses depart SFO daily for Monterey at 9:30 AM, 12:30 PM, 3:30 PM, 6:00 PM, and 8:30 PM. Approximate travel time to Monterey is 3 hours. The bus stops in Monterey at the Monterey Transit Plaza at the intersection of Pearl and Alvarado Streets in downtown Monterey by the Doubletree and Marriott Hotels.

Accommodations

Monterey Conference Center

The Monterey Conference Center offers an exceptional amount of meeting space for the ISCAS. The conference will utilize the Serra Exhibit Hall/Grand Ballroom, the Steinbeck Forum and the DeAnza Ballroom. The conference center is located adjacent the Doubletree and across the street from the Marriott Hotels.

Hotels

The 1998 ISCAS Conference has obtained very reasonable rates for both the Monterey Marriott and the Doubletree Hotel Monterey. Please review the registration form in the center of this advance program to obtain accommodations.

Addresses of the hotels are:

Monterey Marriott Doubletree Hotel Monterey

350 Calle Principal 2 Portola Plaza Monterey, CA 93940 Monterey, CA 93940 Phone: (408) 649-4234 Phone: (408) 649-4511 1-800-228-9290 1-800-222-8733 (TREE) FAX: (408) 372-2968 FAX: (408) 649-3109

www.marriott.com/

www.doubletreemonterey.com

marriott/MRYCA

Internet Access / Email

During the conference there will be locations available for computer and Internet access. These stations are reserved for attendees to contact their email, view conference related websites or view the ISCAS 98 CD-ROM to print selected publications.

Time Zone

During the end of May and early June, the Monterey Peninsula follows the Standard Pacific Time Zone, or 8 hours following Greenwich meantime. We are 3 hours behind the U.S. East Coast and 18 hours behind Japan and 10 hours behind Western Europe.

Climate

The climate during May and June is very pleasant, with highs in the mid 60's F (16 C) and lows in the upper 40's F (4 C). May and June are in the early part of the dry season for central California. Rain is a rarity, but fog can be expected in the mornings. A jacket is recommended in the evenings, especially close to the bay.

Language

The primary language is English; however for the international visitor, many international languages are spoken in the city. Monterey is home for the Monterey Institute of International Studies and the U.S. Defense Language Institute. For interpreter information contact:

Monterey Institute of International Studies (408) 647-4130 Monterey Language Academy (408) 649-8122 Defense Language Institute (408) 242-5844

Emergencies/ Medical

For all emergencies, call **911** for Fire, Police or Ambulance.

Hospital

General Information 408-624-5311 Community Hospital of the Monterey Peninsula (CHOMP) 23625 W.R. Holman Hwy

For emergencies, the Community Hospital of the Monterey Peninsula is located just off of Route 1 south at the Pebble Beach exit.

Currency

Currency exchange is located can be provided at: Marriott Front Desk (for guests) Doubletree Front Desk (for guests)

Local Attractions

The Monterey Peninsula has too many attractions for us to mention in this program. To obtain more than is provided here, please view the website **http://www.monterey.com** for a wealth of local information.

Monterey

Visit the downtown historic sites, Colton Hall famous for the signing of the California Constitution, Robert Louis Stevenson's house, the Custom's House, and the Maritime Museum to name a few. Enjoy dining downtown at Fisherman's Wharf, or just about anywhere.

On Tuesday's from 4PM to 7PM downtown Monterey closes Alvarado St. for buyers and spectators to stroll among more than 100 booths. This event features artisans, prepared food vendors, ethnic clothing, musicians, bookmobile, face-painting, old books, and of course, fruits and vegetables, flowers, baker's alley, meat, nuts, honey and eggs. For you bargain hunters, the Monterey Flea Market is open all day Tuesday and Wednesday at the Monterey Fairgrounds, located just south of Fremont towards the Airport.

Carmel-by-the-Sea

On the other side of the hill from Monterey, Carmel, with a population of 5,000 residents, plays host to thousands of visitors each year. By the 1920's, Carmel had already achieved its international reputation as an "artists' colony." Now its biggest attractions are the downtown shopping district and its beautiful beaches. You won't find many sidewalks, streetlights, neon signs or mailing addresses, but you will find specialty shops, boutiques, art and photography galleries and great restaurants. Visit the quaint shops in the Carmel Barnyard or stop in the Hog's Head Inn and "Make my (your) day."

Pacific Grove

Better known by locals as "America's last hometown," Pacific Grove is also known for its thriving population of Monarch butterflies, but by June, they will have left for the summer. A walk through the residential neighborhoods reveals many well-preserved, turn of the century, Victorian homes. History buffs can visit the Point Piños Lighthouse, the oldest operating facility of its kind on the California coast. The Monterey Bay recreational trail passes by Lover's Point, offering many opportunities to view sea otters, sea lions and occasionally passing whales.

Pebble Beach

A gated community located between Carmel-by-the-Sea and Pacific Grove. Its 17-Mile Drive draws hundreds of visitors daily where views of the ocean, cypress trees, fabulous houses and deer, not to mention the world's most dramatic golf courses, are breathtaking. Visit the shops and dining at the Pebble Beach Lodge or the Inn at Spanish Bay

Big Sur

Visit just 25 miles south of Monterey where the mountains meet the ocean. Examine the Redwood forests or dine overlooking the Pacific.

Moss Landing

This seaside port about 20 miles north of Monterey hosts a great find for the antique hunter or a good reason to go salmon fishing on the bay.

Point Lobos State Park

Located 3 miles south of Carmel on Highway 1 provides breathtaking views. Deriving its name from the offshore rocks at Punta de los Lobos Marinos, Point of the Sea Wolves, where the sound of the sea lions carries inland, the reserve has often been called "the crown jewel of the State Park System." For those lovers of the outdoors, you shouldn't miss this jewel. (http://pt-lobos.parks.state.ca.us)

Useful Information

Conference Venue:

Monterey Conference Center

1 Portola Plaza

Monterey, CA 93940 Phone: (408) 646-3770

Hotels:

1. Monterey Marriott (408) 649-4234

(800) 228-9290

FAX: (408) 372-2968

2. Doubletree Hotel Monterey (408) 649-4511

(800) 222-8733 (TREE)

FAX: (408) 649-3109

Useful email addresses:

Technical Program tchair@iscas.nps.navy.mil
Special Sessions special @iscas.nps.navy.mil
Registration register@iscas.nps.navy.mil
Secretariat webmaster@iscas.nps.navy.mil

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Code EC

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Phone: (408) 656-5074 FAX: (408) 656-5074

Email: webmaster@iscas.nps.navy.mil

http://www.iscas.nps.navy.mil

Visa and Entry into the United States

A visitor's visa is generally required for citizens of foreign countries who wish to enter the United States and stay on a temporary basis. Applicants for visitor visas must show that they qualify under provisions of the Immigration and Nationality Act. The presumption in the law is that every visa applicant is an intending immigrant, therefore applicants for visitor visas must overcome this presumption by demonstrating that: (1) the purpose of their trip is to enter the US for business or pleasure; (2) that they plan to remain for specific limited periods; and (3) that they have residence outside the US as well as other binding ties which will ensure their return abroad at the end of the visit.

Applicants for visitor visas should generally apply at the American Embassy or Consulate nearest their place of permanent residence. Each such applicant must submit: (1) an application form OF-156, completed and signed (blank forms are available without charge at the US consular office); (2) a passport valid for travel to the US with a validity date at least six months beyond the applicant's intended period of stay in the US, and; (3) one photograph 1.5 x 1.5in (37mm x37mm) for each applicant aged 16 and older, showing full face, without a head covering, against a light background.

You can present a letter from the ISCAS 98 Committee (such as your paper acceptance letter) along with your visa application. Visas are not required for citizens of certain countries, provided that the visitor stays in the US for no more that 90 days at a time and application fees may be required. The following is a list of visa waiver pilot program countries: Andorra, Austria, Belgium, Brunei, Denmark, Finland, France, Germany, Iceland, Italy, Ireland, Liechtenstein, Japan, Monaco, Luxembourg, New Zealand, Netherlands, Norway, San Marino, Sweden, Switzerland, Spain, and the United Kingdom. However, please call the American Embassy or Consulate nearest your place of permanent residence to check whether a visa is required for your country, to obtain appropriate forms, and to inquire about the fees and the processing time generally required. Please plan your trip well in advance. For general information, you can call +1 (202) 633-1225 or contact:

Office of Information Immigration and Naturalization Service Department of Justice 425 I St. NW Washington, DC 20536 Tel: +1(202) 514-4316

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ISCAS'98 Registration

All symposium attendees must register and carry their nametag at all times. Participants are encouraged to preregister to take advantage of the reduced rates for early registration and to avoid possible long registration lines at the conference. You can register either electronically on our web site or by mailing or faxing the completed forms found at the end of this advanced program.

The registration desk at the conference will be open beginning Sunday, May 31, 1998, 7:30am - 5:00pm and on each of the following three days.

ISCAS'98 Proceedings

All conference registrations will include one copy of the complete ISACS'98 proceedings on CD-ROM. Hard copy proceedings will be published in the six volumes listed below. Please check the registration form at the end of the program for the price list of hard copy or additional CD-ROM proceedings.

VOL I – Analog circuits & Systems

VOL II - VLSI

VOL III - Neural Networks - Circuit Theory & Power Systems

VOL IV – Multimedia Systems – Comm. Circuits & Systems

VOL V - Digital Signal Proceesing I & II

VOL VI – Computer Aided Design – Communication Networks – Applications

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Those who are not member of IEEE and register for ISCAS'98 at non-member rates are being offered a rare and one-time opportunity to become regular members of IEEE for one year and the membership is FREE. They will also get a free one-year membership in the Circuits and Systems Society and subscription to one of its Transactions chosen by the non-member. All that a non-member has to do is fill a special application form that will be distributed during the registration at ISCAS'98 and mail it to IEEE along with the registration receipt. The Circuits and Systems Society is one of the only two societies which has been granted permission by IEEE to recruit new members at no cost to them. All non-members attending ISCAS'98 are urged to make use of this rare opportunity to become IEEE members absolutely free and enjoy the full benefits of regular membership for one year. For more details, contact Dr. B.A. Shenoi at <bshenoi@cs.wright.edu>.

PRESYMPOSIUM TUTORIALS

Presymposium Tutorial registration and reception are scheduled for 6:00PM - 9:00PM on Saturday, May 30, 1998.

Full Day Tutorials - Sunday May 31, 1998 (8 AM – 5 PM)

1. Introduction to Electronic Image Processing

Presenter - Arthur Weeks, University of Central Florida
Many disciplines of science and engineering acquire and analyze
images on a routine basis. Typically these images must be processed
so that important features can be measured or identified. It is the
goal of this short course to introduce the fundamentals of electronic
image processing to scientists and engineers that must know how to
manipulate images that have been acquired and stored within a
digital computer. This course will cover the following topics:

- a. Image storage, acquisition, and digitization
- b. Image transforms such as Fourier, Hough, Walsh, Hadamar, and Discrete Cosine
- c. The difference between the various types of linear and nonlinear filters and when to use each
- d. The difference between several types of noise in the degradation of an image
- e. Image segmentation techniques and how these techniques are used to extract objects from an image

Text: Fundamentals of Electronic Image Processing, A. Weeks, SPIE and IEEE Press, 1996.

2. Integrated CMOS Image Sensors: Theory and VLSI Implementation

Co-sponsored by the CAS Analog Signal Processing committee and by the CAS Tech Committee on Multimedia Systems and Applications Presenters - Cyrus Afghahi, Intel Corporation and Mohammed Ismail, Ohio State University

The advent of submicron CMOS technology and advances in CMOS mixed analog/digital techniques have enabled the development of integrated CMOS image sensors. Innovative applications of such sensors include modern multimedia systems, computer peripherals, portable consumer products, telemedicine etc. The advantages of CMOS image sensors are low voltage, low power (LV/LP) operation, compatibility with standard cheap digital CMOS processes and the possibility of random access and integration of various functions and algorithms on the same chip. This intensive course will introduce the basics in the theory and design of integrated CMOS image sensors. The coverage will be given at an introductory level. Students and newcomers are particularly encouraged to participate.

This course will enable you to understand specification and device physics related to CMOS processing. Also understand system specification for SNR, frame rate, linearity, A/D concepts for integrated CMOS imagers, theory and design of correlated double sampling, basic VLSI LV/LP circuit techniques for imager design and issues in testing integrated CMOS imagers.

3. Introduction to Power Electronic Circuits

Presenter - Issa Batarseh, University of Central Florida
This course will cover the fundamentals of power electronics including applications. Topics will include modern power switching devices, diode and SCR rectifiers, DC-to-DC Switched-mode converters, DC-to-AC Inverters, introduction to soft-switching converters of both Zero-Current-Switching (ZCS) and Zero-Voltage-Switching (ZVS), Power Factor CorrectionCircuits and Total Harmonic Distortion.

Topics will include: Fundamentals of Power Electronics, Applications of Power Electronics, Modern Switching Power Semiconductor Devices, Control Switching Characteristics, Transformers, Single- and Three-phase Systems, Conversion Techniques, Power Factor and THD, DC-TO-DC Switched-mode Converters, Concept of Source Conversion: source <--> load, Linear Regulators, Switch-mode Converters, Isolated and Non-Isolated Switch-mode Converters, Continuous and Discontinuous Conduction Modes of Operations, Soft-switching Resonant Converters, Principle of Operation (Zero-Current Switching/ Zero-Voltage Switching/ Series and Parallel Resonant Converters), Active Power Factor Correction Circuits, Overview of PFCC and Examples of Active PFCC.

Benefits:

Participants will learn about recent advances made power devices, new power electronic circuits used in the design of power supplies such as soft switching topologies. Participants will have an overview of power factor correction and how to design power factor correction circuits.

4. What You Want to Know about Multimedia Circuits and Systems

Presenters - Ming-Ting Sun, University of Washington, Bing Sheu, University of Southern California, Chung-Yu Wu, National Taiwan University, and Tsuhan Chen, Carnegie Mellon University

A. Network Technologies for Multimedia Applications

Video on demand, distance learning, video-conferencing, and digital library, are just some examples of multimedia applications which will have a large impact to our society. However, before we can realize the full potential of these multimedia services, we have to address the challenge of how to deliver multimedia applications over networks cost-effectively, ubiquitously, and with sufficient quality. Several access network technologies such as POTS, ISDN,

ADSL, HFC, FTTC, MMDS, and LMDS have been proposed for delivering multimedia services to the mass market. There are also significant activities in ITU-T, IETF, and ATM Forum to propose standards for multimedia applications over ATM networks and the Internet. In this tutorial talk, we will review the terminologies, features, advantages, limitations, various issues such as Quality of Service, and progresses for these networking technologies. We will provide the audience with an overall picture of multimedia networking technologies and research issues/opportunities in the active area of multimedia networking.

B. Multimedia Circuits and Systems for Practical Applications

Interaction and merging among the computer, communication, and entertainment industries gave birth to the multimedia era. Multimedia has the potential of becoming one of the most powerful forms of searching for information, communicating ideas, and experiencing new concepts of any form of communication or networking. Many business opportunities are connected through the incredible "Information Superhighway - the Internet." As deepsubmicron microelectronic technologies continue to advance, the executable system algorithms and software tools become more sophisticated. Moreover the hardware becomes cheaper to construct, and the potential for multimedia systems and machines to be commonly used is tremendous. Therefore, the computer, telecommunication, entertainment, cable, and other consumer electronics industries are racing to this emerging market. Knowledge and results achieved by researchers/engineers in the Circuits and Systems Society of IEEE have been making a significant impact on the development of multimedia products and machines. This talk will describe the trends of development in design technologies and emerging products in multimedia. The underlying algorithms, architectures, and circuit techniques will be presented. Selected simulation and measured results will be used to illustrate how the research and development are accomplished.

C. Advanced CMOS Imaging Technology for Multimedia Video Advances in submicron VLSI technologies have made possible the integration of sensing devices and readout circuitry on the same microchip for very inexpensive camera-on-chip solutions. Such a break-through CMOS camera chip is indispensable in future multimedia-based personal computers and portable electronic products. With the high integration level, separate frame-grabber hardware is no longer needed because the CMOS implementation allows random access, and holding of the image data on the chip directly. In this talk, we will describe the architecture of the CMOS imager, the sensing device, and various read-out circuit topologies. Practical consideration of the noise reduction techniques associated with the read-out circuits will be emphasized. The intelligent vision techniques to enhance on-chip imaging capability will also be presented. Finally, the applications to multimedia video will be discussed.

D. New Developments in Standards for Video Coding and Multimedia Communications

We will provide an in-depth yet tutorial-valued review of recent progress in video coding and multimedia communications. In the video coding aspect, state-of-the-art coding standards will be presented. Emphasis will be given to a number of emerging standards, including H.263 Version 2 and MPEG-4. In the communication aspect, special considerations for sending multimedia over IP, wireless, and ATM networks, such as error resilience, will be discussed.

Coding and Compression of Text, Waveforms and Images

Presenter - Samuel D. Stearns, Sandia National Laboratories and Neeraj Magotra, University of New Mexico

This is a full-day tutorial on text, waveform and image compression. It is designed to teach:

- (a) Up-to-date coding and compression procedures,
- (b) the application of these procedures to different types of data and signals, and
- (c) enough basic theory to enable the student to modify and improve standard procedures in specific applications, and to develop new techniques.

COURSE OUTLINE:

The course will cover the following topics, more or less in the order given, over a course period of 6-8 hours:

Basic coding and compression principles:

- (1) Reducing avg. number of bits/symbol; maximizing entropy.
- (2) Producing statistically independent symbols; decorrelation.
 - Definitions of compression applications to be covered:
 - Data types (text, waveforms, images, video) and techniques (lossless compression, lossy compression).
 - Summary of coding and compression techniques to be covered:
 - Run-length coding, Predictive coding, Transform coding, Huffman coding, and Lempel-Ziv-Welsh coding .
 - Codebook techniques: Arithmetic coding
 - Lossless coding and compression of data files in general including:
 - Run-length coding, Huffman coding, Arithmetic coding, Fixed and adaptive implementations, LZW and arithmetic coding, Lossless predictive coding and Lossless transform coding.

Also Compressibility, Compression of waveform data (music, speech, telemetry, etc.) and digital image and video data will be discussed. Compression software will be provided with this course.

6. Recent Progress in Modeling and Simulation of High-Speed VLSI Interconnects

Presenter - Michel Nakhla, Carleton University

The intense drive for signal integrity has been at the forefront of rapid and new development in CAD algorithms. With increasing

demands for high signal speeds coupled with a decrease in feature size, interconnect effects such as signal delay, distortion and crosstalk become the dominant factors limiting overall performance of VLSI systems. On the other hand, interconnect structures can be diverse and present at any of the hierarchical packaging levels including integrated circuits, printed circuit boards, multi-chip modules and backplanes. If not considered during the design stage, interconnect effects can cause logic glitches, which render a fabricated digital circuit inoperable, or they may be able to distort an analog signal such that it fails to meet specifications. Since extra iterations in the design cycle are costly, accurate prediction of these effects is a necessity in high-speed designs. Although conventional CAD tools such as SPICE are used routinely by many engineers for analog simulation and general circuit analysis, these tools do not handle adequately the new emerging challenges of interconnect effects. This lead to intense research during recent years to develop efficient techniques for accurate signal integrity analysis associated with high-speed interconnects.

Recently proposed model-reduction techniques such as Asymptotic Waveform Evaluation (AWE), Complex -Frequency Hopping (CFH) and Krylov space-based methods have proven useful in the analysis of large interconnect structures containing lossless and lossy high-speed interconnects with linear or nonlinear terminations. At a CPU cost of a little more than one DC analysis, these techniques are 2-3 orders of magnitude faster than conventional methods.

This tutorial presents an overview of interconnect modeling/simulation strategies with emphasis on diverse algorithms and applications of model- reduction techniques. The underlying basic concepts will be demonstrated by several practical examples.

The tutorial is intended for developers of CAD tools and for circuit designers as well. It is presented in an easy to understand style and prior background in this area is not required. The first part of the course covers the basic principles of circuit simulation. The second part focuses on issues and analysis techniques related to high-speed circuits and interconnects. Various interconnect models will be considered including RC/RLC lumped, distributed, full-wave, measured and EMI-based. The basic principles of model-reduction techniques will be described in details together with their extension to some frequently-encountered practical situations such as simulation of subcircuits characterized by measured S-parameters and frequency-dependent components (e.g. resulting from skin and proximity effects). Applications cover wide spectrum of implementation hierarchy including chip, multichip modules, packages and printed circuit boards.

7. MPEG Standards and Video Compression

Presenter - Wasfy B. Mikhael, University of Central Florida, Yousef Nijim, Thompson Consumer Electronics, and Arun Ramaswamy, Vela Research, Inc. In recent years, development of products and services offering Multimedia, Video Teleconferencing and full-motion digital video is undergoing remarkable progress, and it is almost certain that digital video will have significant impact on the computer, telecommunications and imaging industries in the next decade. Signal compression and coding techniques are the most crucial step in developing future multimedia applications.

This short course would cover the MPEG-1, MPEG-2, DVB and the ATSC standards. Emphasis would be given to both the compression and system layers.

Standards:

MPEG 1&2 video: Analysis, Fundamentals, motion estimation, and prediction.

MPEG 1&2 Systems: Systems, program, and transport streams, concepts, synchronization, buffer management, timing, and trick modes.

DVB and ATSC specifications.

In this short course you will learn:

Video compression fundamentals and concepts.

Current trends and future directions of implementation.

Multiplexing and demultiplexing of audio and video for MPEG1, and MPEG2.

Understanding video encoders and decoders.

Personnel responsible for strategic planning, business development, technical sales and marketing, Engineering, R&D, and others who are interested in understanding and evaluating MPEG1, MPEG2, and video compression standards and technology should attend.

8. Global ATM Networks (GANs): Technical Issues for Multimedia Applications

Presenter - Andres Albanese, International Computer Science Institute

Internet has evolved into a global network driven by multiple applications that enable users to access global information and to reach level of productivity much higher than those achieved over local and metropolitan area networks. A key factor for the evolution of a network is its simplification to achieve connectivity on a global scale and to support the many applications, service providers, and equipment manufacturers. This global connectivity is being address by the deployment of an ATM (Asynchronous Transfer Mode) service widely supported by the telecommunication and computer industry to provide connectivity from local to global dimensions.

Recently, there has been a large interest in developing commercial applications requiring a service with warranties in quality of services (QOS) beyond the capabilities of the "best effort service" offered by the Internet of today. Such warranties in QOS have been difficult to achieve in a global are a network scenario because of the many barriers caused by the heterogeneity of hosts and diverse

pricing policy of communication services, and various other various issues that show up in different places and at different times. Solutions based in real-time protocols and resource allocation policies have not scale up due to the large numbers of administration domains.

In spite of the lacking of a total solution, Global ATM Networks are being deployed to support group interactions at large, but there are several issues that have to be addressed for their success in achieving high utilization and low cost. Information must be compressed, and encoded to be resilient to unforeseen events and to allow for information recovery under packet loss conditions. The course explores solutions for sharing multimedia applications over a Global Area Network to determine the impact of computer supported collaborative work in the commercial environment.

Here is a list of technical issues to be addressed:

-- No global management.

Several service providers are interworked to provide end-to-end service. The user applications have to share control and management information to monitor the network performance and schedule allocation of network resources.

-- Varying QOS.

End-to-end communication experiences a varying quality of service (QOS) due to the service interworking of several service providers. Bandwidth compression and priority encoding are required to cope with high transmission cost, network congestion, and unpredictable loss.

-- Long round trip delays.

Echo cancellation is required for voice applications involving many users and workstations of heterogeneous performance.

-- Different Time Zones.

Synchronous and asynchronous communications are required among users in different time zones.

-- Security in group communication.

Tools are required to establish trust among service providers, information sources, and users.

The course describes experiments being carried out on MAY (Multimedia Application on Intercontinental Highway), an all ATM Intercontinental network extending from Germany to California implemented to explore multimedia services. It also describes multimedia application experiments, in the San Francisco Bay Area where there is the NTON, National Transparent Optical Network, that is a 10 Gigabit/second multi wavelength back bond interworked with the NASA ACTS (Advanced Communication Technology Satellite).

ICSI is exploring "smart applications" to run over simple networks, without a global management, and without end-to-end QOS guarantees. This "smart applications" will do in the end-station many of the functions done today in the network like resource management, security, and control and all of this in addition of the

usual machine-user interface functions done in the past. Having "Smart applications" dealing with "bursty" congested networks, will allow better network utilization with translate in lower user cost.

Applications running on different user workstations collaborate in sharing service observations to develop user utilization strategies to optimize cost, performance, or quality of service. Optimizations algorithms distributed in workstations will be part a necessary part of applications to find minimum cost, best time for conferencing, and to discover affordable network resources.

9. Multimedia Audiovisual Communication Services

Presenter - K. R. Rao, University of Texas at Arlington

Low bit rate audiovisual communication services aimed at mobile (cellular) channels, multimedia videoconferencing on a PC via ordinary telephone lines, and videophones. Video over the Internet, video e-mail. Object/content based coding. Synthetic & natural (hybrid) video/audio coding. Animation, graphics, video composition etc.

A. IS G.723.1 Dual rate speech coder for multimedia telecommunication transmitting at 5.3 and 6.3 Kbits/s. Also annexes.

B. MPEG-4 Video/Audio

Coding ISO/IEC JTC1/SC29/WG11, Requirements, Test/Evaluation, Call for proposals, Verification Models, (VM) system description language (MSDL) (IS: Nov. 1998). VM 9.0 (Oct. 1997), Synthetic and natural images hybrid coding (SNHC). Audio coding. (Oct. 1997). Audio WD V 5.0. Systems, Content/object based coding, functionalities and applications.

C. Very low bit rate audiovisual communication services, H.263 IS by ITU-T study Group 15. H. 263 is part of H.324 which includes multiplexing protocols, multimedia system control, terminals, dialing etc., IS: International Standard H. 263 + Near term standardization of enhancements of the H. 263 video coding algorithm for real-time telecommunication. IS: April 1997. H. 263 L (Long term) LBR video coding recommendation achieving better video quality, lower complexity and better error resilience. ITU-T low bit-rate experts groups advanced video coding project aimed at real-time audio/visual conversational services/ applications. IS to coincide with MPEG-4. Draft Rec. H.223/Annex A: Multiplexing protocol for low bit-rate multimedia communication.

D. MPEG-2 Multiview profile (stereoscopic video coding), 4:2:2 profile and adaptive audio coder (nonbackward compatible audio) (AAC)

E. JPEG Extensions, JPEG-2000

F. MPEG-7: Multimedia content driven interface. This course is directed at researchers, engineers, technical managers and academia that like to keep abreast with the emerging/established standards aimed at interactive video/audio communications/storage services at very low bit rates so that software/hardware at various levels can be designed/developed. They can also integrate the boards/codecs with their existing PCs/workstations resulting in multimedia,

teleconferencing, videophone and other interactive services.

Half Day Tutorials - Sunday May 31, 1998

10. A Satellite Communications Tutorial (8-12AM)

Presenter - Linwood Jones, University of Central Florida
Because of the wide-scale application of satellite
telecommunications, this course is highly beneficial to electrical
engineers that have an interest in communications, signal processing
and electromagnetics. This course teaches the principles of satellite
communications from a system overview perspective. Topics
include: satellite orbits, communication satellite subsystems (with
emphasis on communications transponders), earth stations,
communications link analyses, frequency division and time division
multiple access.

11. Contemporary Communications Satellite Systems (1-5PM)

Presenter - Linwood Jones, University of Central Florida
This course describes contemporary communications satellite
systems. Three satcom systems, namely: INTELSAT (international
telecommunications), Advanced Communications Technology
Satellite (ACTS) and IRIDUM (spaced-based cellular telephone)
presented in a systems overview. Examples of earth and satellite
subsystems are presented.

12. VLSI Architectures for Video and Data Communications (8-12AM)

Presenter - Keshab Parhi

This tutorial addresses approaches to implementation of next generation signal and video processors necessary for multimedia communication systems. High level transformations will be reviewed. Low power design aspects will be particularly emphasized. Computer arithmetic implementation styles will be considered. Both video and data communication systems will be addressed. Implementation approaches for both dedicated and programmable styles will be considered. Examples such as cable modems and video styles will be considered. Examples such as cable modems and video compression will be addressed. Topics include:

- **A. Architectural Transformations** high level transformations such as pipelining, retiming, parallel processing, algorithmic and numerical strength reduction, folding and unfolding and their impact on area-speed-power tradeoffs. Power reduction by reduction of supply voltage, capacitance and switching activities.
- **B.** Arithmetic architectures high speed and low-power multiplication and addition in two's complement, and redundant number systems, carry-save and canonic signed digit numbers. Implementation styles such as bit- and digit-serial methodologies.
- C Video Compression Systems architectures for DCT, motion estimation and VLDs, implementation using dedicated and

media and MMX programmable DSPs.

D. Data Communication Systems - Architectures for Viterbi decoders, finite field and error control coders, cable modems. Trends in programmable DSPs for wireless systems.

13. XDSL Digital Subscriber Lines (1-5PM)

Presenter - Walter Chen

Discussion about Digital Subscriber Lines. Fundamentals of the DSL engineering process as well as specifics of DSL systems are discussed.

Text: Digital Subscriber Lines, W. Chen, McMillan, 1997.

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Hanzinger, T.

Hamilton, Alister

Lee, Michael Leme, Carlos Azeredo Leong, Choon H. C. Leung, Vincent Li, Chung-Sheng Li, Harry Li, Weiping Lidgey, John Lim, Drahoslav Lim, Y. C. Liou, M. L. Loai, Louis Loloee, Arash Lopez, David Baez Loui, Alex Low, Seo-How Lu , Yilong Lu, W.-S. Luong, Howard Lustenberger, Felix Mactaggart, I. Ross Magdy, Mayoumi Mahattanakul, Jirayuth Mahmoud, Hanan Malik, Saqib Q. Manetakis, K. Manku, Tajinder Marston, Neil Mayaram, Karti McCartney, Damien Mech, R. Meier, Thomas Mendonca, Gelson V. Mirzai, Bahram Mok, Philip K. T. Mokhtari, Mehran Monteiro, Fabrice Moon, Gvu Moore, P. A. Moreno, Moran Moschytz, G. S. Mow, Wai Ho Mueller, Paul Mulder, Jan Murata, Tad Naiknaware, Ravi Nair, Kavita S. Nakhla, Michel Narayana Amit Nekili, Mohamed

Parhi, Keshab K. París, Jordi Patel, R. Payne, Alison Perkins, Stephen J. Piazza F Plett, Calvin Plotkin, E. Raje, Salil Ramprasad, Sumant Reuter, C. Ribas, J. Roberts, Gordon Rosenbaum, Elyse Rost, U. Rovtman, L. M. Rumin, Nicholas Sánchez-Sinencio. Edgar Sansen, W. Sarkar, Nilanjan Sarmiento-Reyes, A. Sarraj, Maher Savaria, Yvon Sawan, Mohamad Schaumann, Rolf Schlarmann, Mark Schmid, Hanspeter Schuelke, Robert Schuppener, Gerd Sculley, Terry Seevinck, E. Serdijn, Wouter A. Sewell, J.I. Shanbhag, Naresh Shen, G.B. Shenai, Krishna Shilman, Michael Shin Da-shan Shpak, Dale Silva Martinez, Jose Smy, Tom Snelgrove, Martin Soma, Mani Song, B. Spalding, George R Sriram, S. Stouraitis, Thanos

Toumazou, C. Tretz, C. Tsai, Ching-Han Tschanz, Jim Tse, Michael C. K. Tzou, Kou-Hu Ubiergo, Gabriel F. Vaidyanathan, P. P. van der Woerd, A. van Staveren, Arie Veillette, Benoit R. Vital, Joao Vlach, Jiri Wad, Paul E. Walkey, David J. Wang, J. Wang, Janet Meiling Wang, Jhing-fa Wang, Maogang Wang, X.-F. Wang, Yao Weisbin, Amy Whiteside, Frank Wing, Omar Wittenburg, J.-P. Wollborn, M. Worapishet, Apisak Wu, K. Wu, Lin Yamamoto, Yoshio Yan, Jie Yang, R. Yazdanpanah, M. Yeap, Gary Yoh, Gilbert Younis, Ahmed Yu, Baiying Yu, Chong-Gun Yu, Qingjian Yun, Xiaoping Zaghloul, Mona Zefran, Milos Zeng, B. Zeng, Fan-Gang Zhang, Chengjin Zhang, Q. J. Zhou, Joe P

Zhu, Weiping

Zukowski, C.

Zohios, Jerasimos

Noren, K. Nowrouzian, B. Ohmacht, M. Ong, Adrian Opal, Ajoy Papathanasiou, K.

Ng, A. E. J.

Ng, Wai Tung

Nguyen, Truong Nielsen, Asbeck

> Tam, Derek Tarr, Garry Thanachayanont, Apinunt Thanos, Stouraitis Thorp, James S. Thulasiraman, K. Tong, Wen

Suder, Ed

Suyama, K.

Sun, Ming-Ting

Swamy, M. S. S.

	n	Monday, June 1		Tuesday, June 2				Wednesday, June 3			
	Sun	MA	MP TA/TB TP		WA/WB		WP				
1		Parameter Estimation	Multidemsional Sig. Processing	Filter Banks & Wavelets	Adpt SP II	ch.	uc.	Adapti Process	_		s: Impl & cations
2		Single-rate & Multirate Filters	Opt. of Subband Cdrs bsd Input	Model Anal & Des. Swit. Cnvt.	Code Obj	d. Rsch.	Sys. Educ.	Steerabl & Appl			Mod & ging
3	ourses	NN for Intelligent Sig. Proc.	Memory, Adapt. & Learning	NNI: Algor. & Computation	NNII: Imp Iss	t. Fund.	8	Nets Bio & Fuzz		Cell N	ular N
4	\mathbf{C}	Image Processing & Coding	Multimedia Sys.& Processing	Speech &Video Processing	Imag & Vid Prc	Govt.	-Ckt.	Image & Process	k Video sing III	Hi-Lev Syn	Gate Arrays
5	Short	Sig. Proc. For Communcations I	Equal./Modul./ Decoding	Communicating with Chaos I	SP for Com II	Session-	Session	Wireless Commun			g & Imp s Comm
6	31	Low-Power IC Techniques	Circuit Tech. For Wireless Appl.	Programmable Logic Devices	Comm Net I	Panel Se	nel Se	Dig Cir Issues	DSP Arch	-	analog & al Test
7		Chaos & Application	Cir. Tech for Wireless Appl.	Nonlinear Ntwk & Systems	Anal VLSI	Рап	Panel	Power Elect	Impr ADCs		urcation haos

		D	a i mi		C T				. 11.0° TTT	G	37.1
8		Data Converters	Continuous- Time	Amplifiers I					Amplifiers III		t Mode
			Filters							Techi	niques
9		Sym. Anal Meth	Hi-Speed Comm.	Logdo	omain	Comm	ch.	nc'	Sw-Capacitors	Amp	olifier
		&Appl to Anal	Circuits	Filt	ters	Chaos	Rsch.	Educ.	Techniques	Buildin	g Blocks
10		Low Power	Interconnect	Oversa	mpled	Circuit		Sys.	Communicating	Oversar	npled &
	ses	Digital Ckt. Dsgn	Modeling & Des	Data Co	nverters	Simul	Fund.		with Chaos III	SD T	ech II
11	onr	VLSI Circuits for	Multi-Sensor	DSF	for	Robo-		& .	VLSI Layout &	De	vice
	ō	MM Sig. Proc.	Data Fusion	Hearin	ng Aids	tics	Govt.	Ckt.	Timing	Mod	eling
12	t (VLSI Digital	Power	Analog	Circuits	Fdbk) –	Sys & Appl Next	Filte	ers &
	Short	Circuits	Distribution Sys.	Des	ign	Sys	Session-	00	Gen Internet	Electron	nics Ckt
13	Sh	Communcations	Image & Video	Adpt	DSP	MM	SSi	Session	Digital Filter Des	MM/	C&S
	-	Circuits	Proc. I	SP I	Implt	Proc			& Impl	Comm	Comm
14		Circuits &	VLSI I	VLSI	Ckt &	Osmpl	nel	nel	VLSI Arch, Alg	Nei	ural
		Power Systems		II	PS II	&SD	Panel	Panel	& CAD	Netv	vorks
15		Analog Filters	Analog & Mixed	CAD I		Sensor		_	CAD III	Analog	
			Sig. VLSI Des			& Ckt				&	Sys

Special Poster

Call for Participation

1st IEEE-CAS Workshop on Wireless-Communication Circuits and Systems

June 22-24, 1998, Hotel Palace, Lucerne, Switzerland

In an effort to apply the vast expertise of the CAS-Society in the area of circuit and system design to the rapidly growing field of wireless communications, a workshop devoted to this theme will be held at the Hotel Palace in Lucerne, Switzerland, from June 22 to 24, 1998. The workshop will combine presentations by invited experts in the field from academia and industry, with panel and informal discussions. Please see

http://www.isi.ee.ethz.ch/workshop98/

Organizing Committee

George S. Moschytz (Chairman) Ruey-Wen Liu (Co-Chairman) John Choma, Jose Franca Quiting Huang Gertjan Kaat Hari Reddy (U.S. Coordinator) Ran-Hong Yan Christofer Toumazou Markus Helfenstein (Coordinator)

For details and registration, please contact:

Dr. Markus Helfenstein Signal and Information Processing Laboratory ETH Zentrum 8092 Zurich, Switzerland email: helfenst@isi.ee.ethz.ch

Tel: (+41) 1 632 3619 Fax: (+41) 1 632 1208

MONDAY – June 1, 1998 (Morning)

MONDAY – JUNE 1, 1998 MORNING

University, Canada

Parameter Estimation - Lecture Professor Eugene I. Plotkin, *Concordia*

On the Harmonic Analysis of Speech

MAA1

MAA1-1

	Stylianou, Ioannis G., AT&T Labs Research
MAA1-2	Parameter-free structure modeling: A Contribution to the solution of highly correlated AR-signals Plotkin, Eugene I. and Swamy, M.N.S., Concordia University
MAA1-3	A new approach for coherent direction-of-arrival
	estimation Ching, Pak Chung, and Lai, Wai Kuen, The Chinese University of
	Hong Kong
MAA1-4	Non-minimum phase FIR System Identification using
	Cumulants with Selected Orders
	Li, S., Sarnoff Corporation, Siu, Wan-Chi, Hong Kong Polythechnic Univ.
MAA1-5	A subspace method for blind single channel
	identification using redundancy transform in
	transmitters
	Choi, Jinho, Curtin University of Technology
MAA1-6	On Implementation of a Least-Squares Based
	Algorithm for Noisy Autoregressive Signals
	Zheng, Wei Xing, University of Western Sydney, Nepean
MAA1-7	Parallel Computation of SVD for High Resolution
	DOA Estimation
	Liu, Zemin and Feng, Gang, Beijing Uni. of Posts & Telecommunications
MAA1-8	Performance Analysis of a class of Cyclic Weighted
	Subspace Fitting Method of Direction Estimation for
	Cyclostationary Signals
	Bao, Zheng and Yu, Hongyi, Xidian University
35440	
MAA2	Single-Rate and Multirate Filters - Lecture
	Dr. Charles Creusere, Naval Air Warfare Center,
	China Lake, CA
344421	
MAA2-1	The Design of Optimum Filters for Quantizing a class
NIAAZ-I	
MIAAZ-1	The Design of Optimum Filters for Quantizing a class
WIAAZ-I	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals
MAA2-1	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation
MAA2-2	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontorn and Nguyen, Truong Q, Boston University
	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontom and Nguyen, Truong Q, Boston University An Iterative Quadratic Programming Method for
MAA2-2	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontom and Nguyen, Truong Q, Boston University An Iterative Quadratic Programming Method for Multirate Filter Design
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MAA2-2 MAA2-3	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontorn and Nguyen, Truong Q, Boston University An Iterative Quadratic Programming Method for Multirate Filter Design Mo, Yanshu; Lu, WS., and Antoniou, Andreas, University of Victoria
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MAA2-2 MAA2-3	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontorn and Nguyen, Truong Q, Boston University An Iterative Quadratic Programming Method for Multirate Filter Design Mo, Yanshu; Lu, WS., and Antoniou, Andreas, University of Victoria Filter Structures Composed of Allpass and FIR Filters for Interpolation and Decimation with Factors of Two
MAA2-2 MAA2-3	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontorn and Nguyen, Truong Q, Boston University An Iterative Quadratic Programming Method for Multirate Filter Design Mo, Yanshu; Lu, WS., and Antoniou, Andreas, University of Victoria Filter Structures Composed of Allpass and FIR Filters for Interpolation and Decimation with Factors of
MAA2-2 MAA2-3 MAA2-4	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontom and Nguyen, Truong Q, Boston University An Iterative Quadratic Programming Method for Multirate Filter Design Mo, Yanshu; Lu, WS., and Antoniou, Andreas, University of Victoria Filter Structures Composed of Allpass and FIR Filters for Interpolation and Decimation with Factors of Two Johansson, Håkan and Wanhammar, Lars, Linköping University Realization of General 2-D Linear-Phrase FIR Filters
MAA2-2 MAA2-3 MAA2-4	The Design of Optimum Filters for Quantizing a class of Non Bandlimited Signals Vaidyanathan, P. P., and Tuqan, Jamal, California Institute of Technology M-th Band Filter Design Based on Cosine Modulation Oraintara, Soontom and Nguyen, Truong Q, Boston University An Iterative Quadratic Programming Method for Multirate Filter Design Mo, Yanshu; Lu, WS., and Antoniou, Andreas, University of Victoria Filter Structures Composed of Allpass and FIR Filters for Interpolation and Decimation with Factors of Two Johansson, Håkan and Wanhammar, Lars, Linköping University

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	inputs using Bifrequency Analysis Akkarakaran, Sony, and Vaidyanathan, P. P, California Institute of Technology
MAA2-7	Synthesis of 2-D Half-Band Filters using the Frequency Response Masking Technique Lim., Yong-Ching, and Low, Seo-How, National University of
	Singapore
MAA2-8	Continuous-time signal processing based on polynomial approximation
	Vesma, Jussi; Saramaki, Tapio; Renfors, Markku; and Ridha,
	Hamila, Tampere University of Technology
MAA3	Neural Networks for Intelligent Signal
	Processing – Special Session
	Professor Chung-Yu Wu, <i>National Chiao Tung University</i>
MAA3-1	Dynamical Functional Artificial Neural Networks (D-FANNs) for Intelligent Signal Processing
MAA3-2	de Figuieredo, Rui J, <i>U.C. Irvine</i> Real-Time On-Line Blind Signal Recovery from
	Dynamic and Nonlinear Mixing Environments Salam, F., Michigan State University; Ertan, Gamze, IC Tech, Inc.
MAA3-3	Compact Neural Network Detector for Har-Disk Drive Using Zero-Forcing Preprocessing Wang, Michelle and Sheu, Bing J, University of Southern
MAA3-4	California VLSI Chaotic Pulse Coded Modulator Using Neural
	Type Cells Newcomb, Robert, University of Maryland; Zaghloul, Mona, The George Washington University; Sellami, Louiza, University of Maryland
MAA3-5	A Multi-Resolution Image Registration Method for
	Multimedia Applications Huang, Chung-Lin and Chang, Pen-Yiing, National Tsing-Hua University
MAA3-6	Blind Separation of convolutes Sources through
	Stochastic Model-Free Optimization
MAA3-7	Cauwenberghs, Gert and Cohen, Marc, Johns Hopkins University Recognition of Handwritten Chinese Postal Address Using Neural Networks
	Su, Yih-Ming, and Wang, Jhing-Fa, National Cheng Kung University
MAA3-8	Intelligent Data Acquisition and Processing for
	Managing Higher-Education Priorities in Modern Era
	Sheu, Bing J, University of Southern California; Lee, Wai, Texas Instruments, Inc.; Young, Albert, The Aerospace Corporation
MAA4	Image Processing and Coding - Lecture
11111111	Professor Ming-Ting Sun, <i>University of</i>
	Washington.
	Prof. Thomas Sikora, HHI, Germany
MAA4-1	A Lapped Transform Progressive Image Coder Tran, Trac, and Nguyen, Truong Q, Boston University
MAA4-2	Joint Channel and Source Decoding for Vector
	Quantized Image Using Turbo Codes Costello, Daniel J., Stevenson, Robert L., Huang, Yih-Fang, and Peng, Zhishi, University of Notre Dame

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	Robust Image Transmission
M	Li, Hongzhi and Chen, Chang, University of Missouri-Columbia
MAA4-4	Dimensional Adaptive Arithmetic Coding for Image Compression
	Ling, Fan, and Li, Weiping, Lehigh University
MAA4-5	An efficient weight optimization algorithm for image
	representation using nonorthogonal basis vectors
MAA4-6	Chan, Yuk-Hee, and Siu, Wan Chi, Hong Kong Polytechnic Univ. Morphological Signal Adaptive Median Filter For Still
MAA4-0	Image and Image Sequence Filtering
	Tsekeridou, Sofia; Kotropoulos, Constantine; Pitas, Ioannis,
	Aristotle Univ. of Thessaloniki
MAA4-7	Vector Set-Partitioning with Classified Successive
	Refinement VQ for Embedded Image Coding Mukherjee, Debargha and Mitra, Sanjit K, University of
	California, Santa Barbara
MAA4-8	Wavelet-based Perceptual Image Compression
	Lai, Yung-Kai and Kuo, CC. J, University of Southern California
	Canyonna
35445	
MAA5	Signal Processing for Communications-I –
	Lecture
354451	Dr. Alex Kot, Nanyang Technological University
MAA5-1	FFT-Based Clipper Receiver for Fast Frequency- Hopping Spread Spectrum System
	Kot, Alex C, Nanyang Technological University; Li, S., Sarnoff
	Corporation; Teh, Kah Chan, Nanyang Technological University
MAA5-2	Harmonic and Intermodulation due to Requantization
	of Fixed-Point Numbers Fettweis, Gerhard and Hentschel, Tim, <i>Dresden Univ. of Tech.</i>
MAA5-3	A comparison of CAP/QAM Architectures
	Abdolhamid, Amir and Johns, David A., University of Toronto
MAA5-4	Quantization for Robust Sequential M-ary Signal
	Detection Ranganathan, Nagarajan and Chandramouli, Rajarathnam,
	University of South Florida
MAA5-5	The Optimal RLS Parameter Tracking Algorithm for
	a Power Amplifier Feed-Forward Linearizer
	Chen, Pei-Yin, National Cheng Kung Univ. and Tsai, R.H., University of Southern California; Chen, Juinn-Tsair, Stanford
	University University
MAA5-6	Selectivity and sensitivity performances of
	superregenerative receivers
	Dehollian, C.; Vouilloz, Alexandre; and Declercq, M., Ecole Polytechnique Federale de Lausanne
MAA5-7	A New Model for the DOA Estimation of the Coherent
	Signals
	Jin, Liang; Yao, Minli; and Yin, Qinye, College of Electronics
MAA5-8	and Information Engineering A System Scheme for Downlink Selective
1/1/1/10-0	Beamforming in Smart Antenna
	Li, S., Sarnoff Corporation, Yin, Qinye and Jin, Liang, College of
	Electronics and Information Engineering
MAA6	Low Power IC Techniques Lecture
MAAU	Low-Power IC Techniques - Lecture Professor Fly G. Friedman University of Rochester
MAA6-1	Professor Eby G. Friedman, <i>University of Rochester</i> Signal Coding for Low Power: Fundamental Limits
MINUTO-1	and Practical Realizations
	Ramprasad, Sumant and Shanbhag, Naresh, University of Illinois
	at Urbana-Champaign

Finite-State Machine Partitioning for Low-Power

MAA6-2

	WIONDAT - Julie 1, 1996 (Wiorining)
	Consumption Micheli, Giovanni D., Stanford University, Vermeulen, Frederik, IMEC, and Benini, Luca, Stanford University
MAA6-3	Use of Charge Sharing to Reduce Energy Consumption in Wide Fan-in Gates
	Elmasry, Mohamed I. and Khellah, Muhammad, University of Waterloo
MAA6-4	Low Power/Low Swing Domino CMOS Logic Rjoub, Abdoul and Koufopavlou, Odysseas, VLSI Design
••••••••••••••••••••••••••••••••••••••	Laboratory and Nikolaidis, Spyridon, Aristotle University of Thessaloniki
MAA6-5	Power Optimization of Combinational Modules Using Self-Timed Precomputation
	Mota, Antonio, and Monteiro, Jose C., INESC-IST, and Oliveira, Arlindo L., Cadence European Labs/INESC-IST
MAA6-6	Low Power, High Performance FFT Design
	Stevens, Kenneth S., and Suter, Bruce, Air Force Institute of Technology
MAA6-7	A configurable 32nd order low voltage low power digital filter for portable applications
351160	Salama, C.Andre and Suvakovik, Dusan, University of Toronto
MAA6-8	Optimal Design of Low Power Nested Gm-C Compensation Amplifiers Using a Current-Based
	MOS Transistor Model
	Sanchez-Sinencio, Edgar, Texas A&M University
MAA7	Chaos and Applications - Lecture
	Professor Martin Hasler, Swiss Federal Institute of
354455	Technology Lausanne
MAA7-1	Synchronous phenomena from chaotic circuits with intermittently coupled capacitors
	Torikai, Hiroyuki; Matsushita, Takanori; and Saito, Toshimichi, Hosei University
MAA7-2	BER Performance of Chaos Communication Systems
	Including Modulation - Demodulation Circuits Nishio, Yoshifumi; Ushida, Akio; and Wada, Masahiro,
	Tokushima University
MAA7-3	Chaos shift keying in the presence of noise: a simple discrete time example
	Hasler, Martin, Swiss Federal Institute of Technology Lausanne
MAA7-4	Chaotic Signals for CW-Ranging Systems - a Baseband System Model for Distance and Bearing
	Estimation
MAA7-5	Bauer, Andreas, Technical University Dresden Design of Infinite Chaotic Polyphase Sequences with
	Perfect Correlation Properties Schwarz, Wolfgang and Goetz, Marco, Technical University
MAA7-6	Dresden Design of nonlinear observers for hyperchaos
1417117-0	synchronization using a scalar signal Mascolo, Saverio, <i>Politecnico di Bari</i> ; Grassi, Giuseppe,
MAA7-7	Universita' di Lecce Synchronization in arrays of chaotic circuits coupled
MAA/-/	via hypergraphs: static and dynamic coupling Wu, Chai Wah, IBM Thomas J. Watson Research Center
MAA7-8	Chaotic and bifurcation behavior in an autonomous flip-flop circuit used by piecewise linear tunnel diodes
	Okazaki, Hideaki, Gifu National College of Technology

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	Professor William Black, <i>Iowa State University</i>
MAA8-1	Fast pipelined A/D converter inCMOS technology Greeneich, E. and Park, Sangbeom, Arizona State University
MAA8-2	A 1V CMOS floating point ADC for portable
	communication devices
	Salama, C., Andre T., and Hayashi, Takayuki, University of Toronto
MAA8-3	A 200 MHz 6-bit folding and interpolating ADC in
WIAAU-J	0.5-um CMOS
	Willson, Alan N., UCLA and Wang, Michelle, University of
	Southern California; Jiang, Hsin-Chin, Institute of Electronics,
N# A A O A	National Chiao-Tung Univ.
MAA8-4	A CMOS Current 0-Mode Pipeline ADC using Zero- Voltage Sampling Technique
	Hui, Ronny and Luong, Howard C., The Hong Kong University of
	Science and Technology
MAA8-5	A comparison of monolithic background calibration in
	two time-interleaved analog-to-digital converters
	Hurst, Paul J.; Lewis, Stephen H.; Fu, Daihong; and Dyer Kenneth C., <i>University of California-Davis</i>
MAA8-6	Improving Linearity in High-Speed Analog-to-Digital
W171710-U	Converters
	Gazzoli, Giuseppe and Gatti, Umberto, <i>Italtel S.p.A.</i> and
	Maloberti, Franco, University of Pavia
MAA8-7	On the Dynamic Performance of High-Speed ADC
	Architectures
	Tan, Nianxiong, Ericsson Components and Gustavsson, Mikael, Linköping University
MAA8-8	Modeling of CMOS Digital-to-Analog Converters for
	Telecommunication
	Wikner, J Jacob, Linkoeping University and Tan, Nianxiong,
	Ericsson Components
MAA9	Sym. Anal. Meths. & Appl. to Anal. Cir.
	Design. – Special Session
	Professor Marwan Hassoun, <i>Iowa State University</i>
MAA9-1	Applications of Symbolic Methods to Circuit Design:
WIAAJ-1	An Overview
	Huelsman, Lawrence, University of Arizona; Konczylowska,
	Agnieska, Laboratoire de Bagneux; Hassoun, Marwan, Iowa State
MA AO 2	University Fig. 1 in - Data Community Applies Applies Applies
MAA9-2	Exploring Data Conversion Architectures by Symbolic Computation
	Franca, J.E., IST Center for Microsystems and Horta, N.C.,
	Faculdade de Ciencias e Tecnologia
MAA9-3	A Symbolic Approach for Testability Evaluation in
	Fault Diagnosis of Nonlinear Analog Circuits
	Manetti, Stefano; Fedi, G.; and Piccirilli, M.C., University of Florence
MAA9-4	Symbolic Analysis of Microwave Circuits
	Alquie, G., LEAM, Universite Pierre et Marie Curie; Boukadoum,
	M., Universite du Quebec a Montreal; Vasilescu, G., LEAM,
	Univ. Pierre et Marie Curie; Benboudjema, Kamel, Com Dev Ltd.
MAA9-5	Univ. Pierre et Marie Curie; Benboudjema, Kamel, Com Dev Ltd. Behavioral Modeling of Analog Blocks Using Symbolic
MAA9-5	Univ. Pierre et Marie Curie; Benboudjema, Kamel, Com Dev Ltd. Behavioral Modeling of Analog Blocks Using Symbolic Analysis
MAA9-5	Univ. Pierre et Marie Curie; Benboudjema, Kamel, Com Dev Ltd. Behavioral Modeling of Analog Blocks Using Symbolic

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	Leyn, F. and Debyser, Geert, Katholieke Universiteit Leuvan; Styblinsky, M., Texas A&M University; Gielen, G., Katholieke Universiteit Leuvan
MAA9-7	Approximate Symbolic Pole/Zero Extraction Using Equation-Based Simplification Driven by Eigenvalue shift Prediction
	Wiese, Michael; Sommer, Ralk, and Hennig, Eckhard, Institute of Industrial Mathematics (ITWM)
MAA9-8	Efficient Symbolic Analysis of Large Circuits Using Sensitivity-Driven Ranking of Matroid Intersections Wambacq, Piet, Katholieke Universiteit Leuvan; Dobrovlny, Petr Technical University Brno; Gielen, G. and Sansen, Willy, Katholieke Universiteit Leuvan
MAA10	Low Power Digital Circuit Design - Lecture Professor Naresh Shanbhag, University of Illinois
MAA10-1	Analytical Expressions for Average Bit Statistics of Signal Lines in DSP Architectures Bobba, Sudhakar, University of Illinois; Shanbhag, Naresh, University of Illinois at Urbana-Champaign; Hajj, Ibrahim, University of Illinois
MAA10-2	Architecture Selection of a Flexible DSP Core Using Reconfigurable System Software Park, Kyu-Ho; Lee, Jong-Yeol; Kim, Jong-Sun; Lee, Yong-Hoor Kyung, Chong-Min; Lee, Dae-Hyun; Yoon, Hyun-Dhong; Hwang, and Seung H., Korea Advanced Institute of Science and Technology
MAA10-3	Analyzing Effects of Cache Parameters on Memory Power Consumption of Video Algorithms Kanpoor, Bhanu, Texas Instrument Inc.
MAA10-4	Transformational Based Synthesis of VLSI Based DSI Systems for Low Power Using a Genetic Algorithm Bright, M.S. and Arslan, T., Cardiff University of Wales
MAA10-5	Power Estimation Using Input/Output Transition Analysis Lucke, Lori E.; Lee, Junsoo; and Vinnakota, Bapi, University of Minnesota
MAA10-6	Fast Delay-Dependent Power Estimation of Large Combinational Circuits Jou, Jer-Min and Chen, Pei-Yin, National Cheng Kung Univ. Wang, Michelle, University of Southern California
MAA10-7	Resynthesis of sequential circuits for low power Banerjee, Prithviraj, Northwestern University
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Multimedia Terminals

Architecture

A Paradigm for Collaboration Across a Globally Networked Environment: Implementation of ISCAS

Flexible MPEG Audio Decoder Layer III Chip

Low Power 2D DCT Chip Design for Wireless

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MAA11-6	On the Impact of Multimedia Coding Algorithms to Architectures Chen, Tsuhan, Carnegie Mellon University
MAA11-7	Providing Multicast Video on Demand Using Native- Mode Asynchronous Transfer Mode Kang, Sung Mo; Hiltenbrant, John; Hossain, Ashfaq and Lockwood, John, <i>University of Illinois</i>
MAA11-8	Architectures for the 3-D Discrete Wavelet Transform Weeks, Michael and Bayoumi, Magdy, University of Southwestern Louisiana
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MAA12-2	Ultra Low-Voltage Digital Floating-Gate UVMOS (FGUVMOS) circuits Lande, Tor Sverre; Wisland, Lande; Berg, Yngvar; Wisland, Dag T. and Mikkelsen, Sindre, University of Oslo
MAA12-3	Single Ended Swing Restoring Pass Transistor Cells for Logic Synthesis and Optimization Pihl, Johnny, Royal Melbourne Institute of Technology
MAA12-4	Edge Reversal-Based Asynchronous Timing Synthesis Granja, Edson and Franca, Felipe, COPPE/Univ Federal do Rio de Janeiro
MAA12-5	A New True-Single-Phrase-Clocking (TSPC) BiCMOS Dynamic Pipelined Logic Tseng, Yuh-Kuang, National Chiao-Tung University; Wu, C., City University of Hong Kong
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MAA12-7	Low ringing I/O buffer design Carro, Luigi and Bego, Lauro J., Universidad Federal do Rio Grande do Sul
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MAA13-2	A 3-V 45-mW CMOS Differential Bandpass Amplifier for GSM Receivers Luong, Howard C. and Leung, David, The Hong Kong University of Science and Technology

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	Research Laboratories and Mokhtari, Mehran; Kerzar, Boris;
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MAA13-14	Reconfigurable Signal Processing ASIC Architecture
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	of Technology
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	California
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MPA4-7	A fast approach to detecting human faces in a complex background Lam, Kenneth, Hong Kong University
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MPA5-2	Combined Carrier Phase Tracking and Equalization for pi/4-DQPSK Signals in Mobile Radio Liu, Der-Zheng and Wei, Che-Ho, National Chiao Tung University
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MPA5-6	Efficient Management of In-Place Path Metric Update and its Implementation for Viterbi Decoders Shieh, Ming-Der, National Yunlin Institute of Tech
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	system with strength reduction Shalash, Ahmed F. and Parhi, Keshab K., <i>University of Minnesota</i>
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	Professor Martin Snelgrove, Carleton University
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	McGill University
MPA8-3	An Autozeroing Floating-Gate Bandpass Amplifier
	Diorio, Chris, <i>University of Washington</i> ; Hasler, Paul E., <i>Georgia Institute of Technology</i> ; Minch, Bradley A., <i>Cornell University</i>
MPA8-4	A Novel Loss Control Feedback Loop For Vco Indirect
WII A0-4	Tuning of Rf Integrated Filters
	Tsividis, Yannis, Columbia University
	Li, S., Sarnoff Corporation
MPA8-5	A 2V Low-Distortion Biquadratic Cell
	Python, Dominique and Enz, Christian, Swiss Federal Institute of
MPA8-6	Technology (EPFL)
MPA8-0	Analysis of Noise and Interference in Companding Signal Processors
	Toth, Laszlo, Lucent Technologies Inc.; Tsividis, Yannis and
	Krishnapura, Nagendra, Columbia University
MPA8-7	Fundamental Limits to the Dynamic Range of
	Integrated Continuous-Time Integrators
	Moreira, Jose P., INESC; Verhoeven, Chris J., T.U. Delft
MPA8-8	Impedance Scalers for IC Active Filters
	Silva-Martinez, Jose, I.N.A.O.E.
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MPA9	Lecture
	Lecture Professor R. Jacob Baker, University of Idaho
	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of
MPA9-1	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology
	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a
MPA9-1	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated
MPA9-1	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL
MPA9-1	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL Halonen, Kari A. and Routama, Jarkko A., Helsinki University of
MPA9-1	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL
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MPA9-1	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL Halonen, Kari A. and Routama, Jarkko A., Helsinki University of Technology Low Noise Clock Synthesizer Design using Optimal Bandwidth Kim, Beomsup; Lim, Kyoohyun, and Park, Chan-Hong, Korea
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MPA9-1	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL Halonen, Kari A. and Routama, Jarkko A., Helsinki University of Technology Low Noise Clock Synthesizer Design using Optimal Bandwidth Kim, Beomsup; Lim, Kyoohyun, and Park, Chan-Hong, Korea Advanced Institute of Science and Technology A Low Jitter 1.25GHz CMOS Analog PLL for Clock
MPA9-1 MPA9-2 MPA9-3	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL Halonen, Kari A. and Routama, Jarkko A., Helsinki University of Technology Low Noise Clock Synthesizer Design using Optimal Bandwidth Kim, Beomsup; Lim, Kyoohyun, and Park, Chan-Hong, Korea Advanced Institute of Science and Technology A Low Jitter 1.25GHz CMOS Analog PLL for Clock Recovery
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MPA9-1 MPA9-2 MPA9-3	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL Halonen, Kari A. and Routama, Jarkko A., Helsinki University of Technology Low Noise Clock Synthesizer Design using Optimal Bandwidth Kim, Beomsup; Lim, Kyoohyun, and Park, Chan-Hong, Korea Advanced Institute of Science and Technology A Low Jitter 1.25GHz CMOS Analog PLL for Clock Recovery Wu, Lin and Black, William C., Iowa State University A Modified Costas Loop for Clock Recovery and
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MPA9-1 MPA9-2 MPA9-3 MPA9-4 MPA9-5	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL Halonen, Kari A. and Routama, Jarkko A., Helsinki University of Technology Low Noise Clock Synthesizer Design using Optimal Bandwidth Kim, Beomsup; Lim, Kyoohyun, and Park, Chan-Hong, Korea Advanced Institute of Science and Technology A Low Jitter 1.25GHz CMOS Analog PLL for Clock Recovery Wu, Lin and Black, William C., Iowa State University A Modified Costas Loop for Clock Recovery and Frequency Synthesis Geiger, Randall and Amourah, Mezyad, Iowa State University Effects of Random Jitter on High-Speed CMOS Oscillators
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MPA9-1 MPA9-2 MPA9-3 MPA9-4 MPA9-5	Lecture Professor R. Jacob Baker, University of Idaho A Phase Detector with No Dead Zone and a Very Wide Output Voltage Range Chargepump Ahola, Rami and Halonen, Kari A., Helsinki University of Technology A 150Mbit/s CMOS clock recovery PLL including a new improved phase detector and a fully integrated FLL Halonen, Kari A. and Routama, Jarkko A., Helsinki University of Technology Low Noise Clock Synthesizer Design using Optimal Bandwidth Kim, Beomsup; Lim, Kyoohyun, and Park, Chan-Hong, Korea Advanced Institute of Science and Technology A Low Jitter 1.25GHz CMOS Analog PLL for Clock Recovery Wu, Lin and Black, William C., Iowa State University A Modified Costas Loop for Clock Recovery and Frequency Synthesis Geiger, Randall and Amourah, Mezyad, Iowa State University Effects of Random Jitter on High-Speed CMOS Oscillators

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MPA10-1	A Universal Closed-loop High-Speed Interconnect Model for Genera Purpose Simulators Achar, R. and Nakhla, Michel, Carleton University; Li, S., Sarnoff Corporation
MPA10-2	Synthesis of High-Speed Interconnect Subnetworks Nakhla, Michel and Achar, R, Carleton University
MPA10-3	Multipoint multiport algorithm for passive reduced- order model of interconnect networks Yu, Qingjian; Wang, Janet M.L., and Kuh, Ernest S., <i>Univ. of California at Berkley</i>
MPA10-4	Applications of Complex Frequency Hopping Method in PCB Signal Integrity Simulation Mu, Z., Cadence Design Systems
MPA10-5	Time Domain Method for Reduced Order Synthesis of Large RC Circuits Batterywala, Shabbir H. and Narayanan, H., Indian Institute of Technology Bombay
MPA10-6	CMOS Inverter Current and Delay Model Incorporating Interconnect Effects
MPA10-7	Hafed, Mohamed and Rumin, Nicholas C., McGill University PATH RESIZING BASED ON INCREMENTAL TECHNIQUE Azemard, Nadine; Auvergne, Daniel, and Cremoux, Severine,
MPA10-8	LIRMM Substrate Coupling Analysis and Simulation for an Industrial Phase-Locked Loop
	Welch, Ryan J., Wright-Labs and Yang, Andrew T., University of Washington
MPA11	Multi Sensor Data Fusion: Application and Issues - Special
	LCDR Sean Midwood, Canadian Navy
MPA11-1	An Introduction to Multisensor Data Fusion Llinas, James, State University of New York at Buffalo
MPA11-2	Perspectives on the Progress of Data Fusion for Soliders Hall, David L., Penn State University
MPA11-3	Multisensor Data Fusion Algorithm for the USCG's Vessel Traffic Services System Glenn, Ian, Canadian Army; Midwood, Sean, Canadian Navy
MPA11-4	Managing the Development of MSDF Systems for Use in Joint and Coalition Warfare
MPA11-5	White, Frank E., SPAWAR Systems Center Microsimulation as a Tool for Target Tracking in Terrain Brown, Donald E., University of Virginia
MPA11-6	Imagery and Terrain-Based DF, Involving Spatial Imagery with Application to Information Warfare Waltz, Ed, ERIM International

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MPA11-8	Dynamic Multisource Information Fusion Flank, Steven, <i>DARPA-ISO</i>
MPA11-9	The Canada-Netherlands Collaboration on Multisensor Data Fusion and Other Canada-NATO MSDF Activities Bosse, Eloe, Defense Research Establishment Valcartier
MPA12	Power Distriibution Systems - Lecture
MPA12-1	Professor David A. Johns, <i>University of Toronto</i> A power distributor with winner-take-all function
	Saito, Toshimichi and Mokunaka, Naoki, Hosei University
MPA12-2	A DSP controlled variable-frequency resonant- commutated converter Chickamenahalli, Shamala; Liu, Jun, and Nallaperumal, Venkateshwara, Wayne State University
MPA12-3	Inter-harmonics at the output of a converter with time dependent load
MPA12-4	Mariscotti, Andrea, Dipartimento Ingegneria Elettrica New Parallel Tabu Search for Voltage and Reactive Power Control in Power Systems Hayashi, Takanori and Mori, Hiroyuki, Meiji University
MPA12-5	Power Energy Metering Based on Random Signal Processing Franquelo, Leopoldo G., Escuela Superior de Ingenieros Toral, Sergio L.; Quero, Jose M.; Quero, Jose Manuel; and Toral, Sergio, E.T.S. Ingenieros, Grupo de Tecnologia Electronica
MPA12-6	Setgio, E.1.5. Ingenieros, Grupo de Lectrologia Electronica Sensitivity Analysis of Power System Trajectories: Recent Results Hiskens, Ian A. and Pai, University of Illinois at Urbana- Champaign
MPA12-7	Contingency Screening using interval analysis in power systems
MPA12-8	Yuihara, Atsushi and Mori, Hiroyuki, Meiji University Estimation of Nonsinusoidal Bus Voltage Waveforms in Power Systems Gou, Bei and Abur, Ali, Texas A&M University
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	Dr. Ya-Qin Zhang, Sarnoff Corporation Professor Oscar Au, Hong Kong Univ. of Science & Technology
MPA13-1	A Multi-Transform Approach to Reversible Embedded Image Compression
MPA13-2	Adams, Michael D. and Antoniou, Andreas, University of Victoria Dynamic Load Balancing For Distributed Movie- Based Web-Browsing System Komatsu, Naohisa; Hiraiwa, Atsunobu; Ikeda, Hiroaki, and Komiya, Kazumi, Telecommunications Advancement Org. of
MPA13-3	Japan The Impact of Encoding Algorithms on MPEG VLSI Implementation Cheng, Sheu-Chih; Hang, Hsueh-Ming, and Cheng, Sheu-Chih, National Chiao-Tung University
MPA13-4	Efficient subtree splitting algorithm for wavelet-Based fractal image coding Zhang, Huaizhou, Chinese Academy of Science Po, Lai-Man and Lai-Man, Po, City University of Hong Kong

	Punctured Convolutional Codes
	Chen, Chang and Cai, Jianfei, University of Missouri-Columbia
MPA13-6	Fast Motion Estimation Based on Total Least Squares
	for Video Encoding
	Deshpande, Sachin G. and Hwang, J.N., University of Washington
MPA13-7	Error Control for H.263 Video Transmission Over
	Wireless Channels
	Lin, David, National Chiao Tung University
	Chen, Pei-Yin, National Cheng Kung Univ.
MPA13-8	Comparsion between Block-based and Pixel-based
	Temporal Interpolation for Video Coding
	Au, Oscar and Tang, Chi-wah, The Hong Kong University of
	Science and Technology
MPA13-9	A scalable Hierarchical Motion Estimation Algorithm
	for MPEG-2
	Chiang, ,Tihao and Song, Xudong, Sarnoff Corporation
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	Macroblock-based Repetitive Padding for MPEG-4
	Video
	Liu, K.J.Ray and Chen, Jie, University of Maryland
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	Reallocation to Enhance Quality on Face Region in
	Very Low Bitrate Video Coding
	Chen, Liang-Gee and Chang, Hao-Chieh, National Taiwan
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	Algorithm through Extraction of Background and
	Object
	Mok, Wai Hung and Yung, H. C. Nelson, <i>University of Hong</i>
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	logic and gray theory Jou, Jer-Min and Chen, Pei-Yin, National Cheng Kung Univ.
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MPA13-14	An Integrated Classifier in Classified Coding Chen, Li, Shantou University; Huang, Jiwu, New Jersey Institute
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	Fahmy, M. and Quddus, Azhar, King Fahd University of
	Petroleum and Minerals
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	Deformable Model
	Yung, H. C. Nelson and Lai, Hon Seng, University of Hong Kong
MPA13-17	Error Resilient Coding for JPEG Image Transmission
	over Wireless Fading Channels
	Chandramouli, R.; Ramadoss, S.J., and Ranganathan, N.,
	University of South Florida
MPA13-18	Novel Error Concealment Techniques for Images in
	ATM Environments
	Marvasti, Farokh A. and Hasan, Moh'd A., King's College
	London, University of London
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	Subband Coding
	Liu, Chi-Min, National Chia0 Tung University
MPA13-20	Analyzing Memory Bandwith Requirments for Video
	Applications
	Kapoor, Bhanu, Texas Instrument Inc.
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	based Hybrid Coding Algorithm
	Hao-Chieh, Chang, National Taiwan University
	Tsai, Tsung-Han ,National Taiwan University
	Hsu-Tung, Chen, National Taiwan University
	Chen, Liang-Gee, National Taiwan University
	Huang, Sheng-Chieh, National Taiwan University Chen, Pei-Yin, National Cheng Kung Univ.
	Chen, Pel-Yin, National Cheng Kung Univ.

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	Chang, Pen-Yiing, National Tsing-Hua University Huang, Yan-ping, National Taiwan University
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	Li, Wenzhe, Universitat Erlangen-Nurnberg; Lin, Kuang,
	Thomson Multimedia; Unbehauen, Rolf, Universitat Erlangen-
	Nurnberg
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	implementation
	Lim, Young-Kwon; Park, Sanggyu, and Kwak, Jinsuk, Realistic Telecommunications Section, ETRI
MPA13-24	Rate Control in Video Coding by Adaptive Mode
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	Ryu, Chul, Polytechnic University; Kim, Seung P., InterDigital
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MPA14	VLSI I - Poster
	Professor Igor Filanovsky, University of Alberta
MPA14-1	A Pulse-Triggered TSPC Flip-Flop for High-Speed
	Low-Power VLSI Design Applications
MPA14-2	Yang, Po-Hui and Wang, Jinn-Shyan, Chung Cheng University
MIPA14-2	A Programmable Interpolation Filter for Digital Communications Applications
	Kuo, Tzu-Chieh, UCLA/Pairgain Technologies, Inc.
	Wilson, Alan N, UCLA
MPA14-3	Validation of an Accurate and Simple Delay Model,
	and its Application to Voltage Scaling
	Aas, Einar J. and Njoelstad, Tormod, Norwegian Univ. of Science
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MPA14-4	A compact 31-input programmable majority gate
	based on Capacitive Threshold Logic Gurkaynak, Frank K., Swiss Federal Institute of Technology
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	Jeong, Gabjoong, Yonsei University
MPA14-6	Optimum Design for a Two-Stage CMOS I/O ESD
	Protection Circuit
	Li, Tong, University of Illinois at Urbana-Champaign
MPA14-7	Low-Swing Charge Recycle bus drivers
	Karlsson, Magnus; Vesterbacka, Mark, and Wanhammar, Lars,
MPA14-8	Linköping University, Sweden A Pipelined Architecture of Fast Modular
WII A14-0	Multiplication for RSA Cryptography
	Shieh, Ming-Der, National yunlin institute of Technolgy
MPA14-9	Multiple-valued Logic Voltage-mode circuits based on
	true single-phrase clocked logic
	Thanailakis, A.; Karafyllidis, I.; Thoidis, I., and Soudris, D., VLSI
MD41410	Design of Electricaland Electronic Materials
MPA14-10	Current Sensing Differential Logic (CSDL) for Low- Power and High-Speed Systems
	Park, Joonbae; Kim, Wonchan, and Lee, Jeongho, Seoul National
	University
MPA14-11	A Divide-by-4 Circuit Implemented in Low Voltage,
	High Speed Silicon Bipolar Design Topology
	Mokhtari, Mehran; Tenhunen, Hannu, and Schuppener, Gerd,
	Royal Institute of Technology
MPA14-12	Automated Implementation of RNS to Binary
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	Henkelmann, Heiko, University of Bremen
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	Circuit Applicable to Asynchronous/Synchronous
	Logic
	Yoshizawa, Hiroyasu; Taniguchi, Kenji, and Nakashi, Kenichi,
	Grad. School of ISEE, Kyushu University
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MPA14-15	Design Issues in Cross-Coupled Inerter Pair Sense
	Amplifier
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	Hajimiri, Ali, Stanford University
MPA14-16	A Novel Low-Power Building Block Cell for Adders
	Shams, Ahmed, University of Southwestern LA
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MPA14-17	Modified Half Rail Differential Logic For Reduced
	Internal Logic Swing
	Won, Jae-Hee and Choi, Kiyoung, Seoul National University
MPA14-18	A Reconfigurable Integrated Circuit for High
	Performance Computer Arithmetic
	Quigley, Steven F. and Miller, Neil L., University of Birmingham
MPA14-19	Data-Driven Self-Timed Differential Cascode Voltage
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	Mathew, Sanu and Sridhar, Ramalingam, The State University of
	New York at Buffalo
MPA14-20	A Novel Asynchronous Control Unit and the
	Application to a Pipelined Multiplier
	Liao, Xiaofeng, University of Electronic Science and Technology
	Chiang, Jen-Shiun, <i>Tamkang University</i>
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MPA14-21	The Design and Implementation of an Asynchronous
	Radix-2 Non-Restoring 32-B/32-B Ring Divider
	Liao, Xiaofeng, University of Electronic Science and Technology
	Chaing, Jen-Shiun, Tamkang University
MPA14-22	A Novel Digital-Serial Systolic Array for Modular
.,	Multiplication
	Wang, Chin-Liang and Guo, Jyh-Huei, National Tsing Hua Univ.
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MPA14-23	Dual Signal Configuration for Low Power Voltage High Performance Pipline Multiplier
MPA14-23	High Performance Pipline Multiplier
MPA14-23	High Performance Pipline Multiplier Ng, A.E., University of Glasgow
	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong
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	High Performance Pipline Multiplier Ng, A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication
	High Performance Pipline Multiplier Ng, A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion
	High Performance Pipline Multiplier Ng, A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication
MPA14-24	High Performance Pipline Multiplier Ng, A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology
	High Performance Pipline Multiplier Ng, A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology
MPA14-24	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology Analog and Mixed-Signal VLSI Design —
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MPA14-24	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology Analog and Mixed-Signal VLSI Design —
MPA14-24	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology Analog and Mixed-Signal VLSI Design — Poster
MPA14-24 MPA15	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology Analog and Mixed-Signal VLSI Design — Poster Professor Sherif Embabi, Texas A&M University Design of a Delta Sigma Modulated Switching Power
MPA14-24 MPA15	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology Analog and Mixed-Signal VLSI Design — Poster Professor Sherif Embabi, Texas A&M University Design of a Delta Sigma Modulated Switching Power Supply
MPA14-24 MPA15 MPA15-1	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology Analog and Mixed-Signal VLSI Design — Poster Professor Sherif Embabi, Texas A&M University Design of a Delta Sigma Modulated Switching Power Supply Dunlap, Steven and Fiez, Terri S., Washington State University
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MPA15-1 MPA15-2	High Performance Pipline Multiplier Ng. A.E., University of Glasgow Wu, Angus, City University of Hong Kong Circuit Design for Current-Sensing Completion Dedication Lampinen, Harri, Tampere University of Technology Analog and Mixed-Signal VLSI Design — Poster Professor Sherif Embabi, Texas A&M University Design of a Delta Sigma Modulated Switching Power Supply Dunlap, Steven and Fiez, Terri S., Washington State University Theory and Implementation of a Gaussian Decay Low- pass Filter Pu, Chiang-Jung and Harris, John G., University of Florida Circuit Tolerances and Word Lengths in Overlap
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	Picun, Gonzalo F., Universidad de la Republica
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TAA2	Model., Anal. & Des. of Switching Mode
	Converters - Special
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	Universita di Salerno
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	Wu, C.; Chung, Henry, and Lau, W.H., City University of Hong
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TAA2-8	General Purpose Sliding-Mode Controller for
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	Kuh, Anthony, University of Hawaii A New Class of Apex-Like PCA Algorithms Fiori, Simone; Piazza, Francesco, and Uncini, Aurelio, University of Ancona MultiResolution Neural Networks For Recursive Signal Decomposition Wong, K. W. and Kan, Kai Chiu, City University of Hong Kong
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Bidirectional Buck-Boost Converter with Variable

TAA4	Speech and Video Processing - Lecture
	Professor Chung-Yu Wu
	National Chiao Tung University
	Prof. Thanos Stouraitis
	University of Patras, Greece
TAA4-1	Efficient Coding of Linear Predictive Coefficients for
	Wideband Speech
	Sandler, Mark B. and Magrath, Anthony J., King's College, University of London
TAA4-2	Regressive Linear Prediction with Triplets - An
111114-2	Effective All-Pole Modelling Technique for Speech
	Processing
	Varho, Susanna and Alku, Paavo, University of Turku
TAA4-3	A Novel Algorithm to Estimate the Line Spectral
	Frequencies From LPC Coefficients
	Nakhai, Mohammad R. and Marvasti, Farokh A., King's College, University of London
TAA4-4	Wideband Speech Recovery from
	Bandlimited Speech Using Neural Network
	Yasukawa, Hiroshi, Nippon Telegraph and Telephone
	Corporation
TAA4-5	An Efficient Method for the Removal of Impulse Noise
	from Speech and Audio Signals
	Chandra, Charu; Moore, Michael S., and Mitra, Sanjit K., University of California – Santa Barbara
TAA4-6	Finite Wordlength Effects Analysis and Wordlength
	Optimization of AC-3 Audio Decoder
	Lee, Seokjun and Sung, Wonyong, Seoul National University
TAA4-7	The NLMS Algorithm Using a Quasi-Orthonormal
	Initialization Scheme for Acoustic Echo Cancellation Chen, Heng-Chou and Chen, Oscal TC., National Chung Cheng
	University
TAA4-8	Motion Estimation Using an Efficient Four-Step
	Search Method
	Wang, Kuan-Tsang and Chen, Oscal TC., National Chung
	Cheng University
TAA5	Comment the solution of the control
IAAS	Communiating with Chaos I - Special
	Professor Michael Peter Kennedy
T	University College Dublin
TAA5-1	Recent Advances in Communicating with Chaos Jako, Z.; Kis, G.; Kennedy, M.P., and Kolumban, G.,
	Technical University of Budapest
TAA5-2	Statistical Analysis of Chaotic Communication
	Schemes
	Schwarz, Wolfgang; Abel, A., and Goetz, M., Technical University of Dresden
TAA5-3	The Performance of Chaos Shift Keying:
11113-3	Synchronization versus Symbolic Backtracking
	Schweizer, J., EPFL
TAA5-4	Integrated Circuit Blocks for a DCSK Chaos Radio
	Delgado-Restitu, Manuel, Instituto de Microelectronica de Sevilla
	Rodriguez-Vazq, Angel, Instituto de Microelectronica de Sevilla
TAA5-5	Porra, Veikko, Helsinki University of Technology FM-DCSK
TAA5-5	FM-DCSK Kennedy, M.P.; Jako, Z.; Kolumban, G., and Kis, G., Technical
	FM-DCSK Kennedy, M.P.; Jako, Z.; Kolumban, G., and Kis, G., Technical University of Budapest
TAA5-5 TAA5-6	FM-DCSK Kennedy, M.P.; Jako, Z.; Kolumban, G., and Kis, G., Technical University of Budapest Modulation RF-Carriers by Chaotic Signals
	FM-DCSK Kennedy, M.P.; Jako, Z.; Kolumban, G., and Kis, G., Technical University of Budapest
	FM-DCSK Kennedy, M.P.; Jako, Z.; Kolumban, G., and Kis, G., Technical University of Budapest Modulation RF-Carriers by Chaotic Signals

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TAA5-8	choas Itoh, M., Nagasaki Sequence Synchronization in Choas-Based DS-CDMA Systems Rovatti, R.; Setti, G., and Mazzini, G., University of Bologna
TAA5-9	Implementing RF Broadband Chaotic Oscillators: Design Issues and Results Silva, Christopher P. and Young, Albert, The Aerospace Corporation
TAA7	Nonlinear Networks and Systems - Lecture
TAA7-1	Professor K. S. Chao, Texas Tech University A Simple bracketing Algorythem for determining transition time instants in pwl circuits Premoli, Amedio; and Pastore, Stefano, DEEI, University of Triesti
TAA7-2	Global Asymptotic Stability of A Class of Nonlinear Dynamical Systems Xiong, Kaiqi, North Carolina State University
TAA7-3	A Discrete-Time Approach to the Steady State Analysis of Distributed Nonlinear Circuits Miró-Sans, Joan; Palà-Schönwäld, Pere, and Bonet-Dalmau, Jordi, UPC-Department of Signal Theory and Communications
TAA7-4	Bifurcation of Switched Nonlinear Dynamical Systems Kousaka, Takuji; Kawakami, Hiroshi, and Ueta, Tetsushi, <i>The</i> University of Tokushima
TAA7-5	Chaos generators with piecewise linear trajectory Tsubone, Tadashi and Saito, Toshimichi, Hosei University Schwarz, Wolfgang, Technical University Dresden
TAA7-6	Spatiotemporal Pattern from a Simple Hysteresis Network Jin'no, Kenya and Tanaka, Mamoru, Sophia University
TAA7-7	Synchronization Phenomena from a Simple Hysteresis Neural Network with Different Time Constants Nakaguchi, Toshiya and Jin'no, Kenya, Sophia University
TAA7-8	Effects of the deviation of element values in a ring of three and four coupled van der Pol oscillators Endo, Tetsuro and Ookawara, Tsuyoshi, <i>Meiji University</i>
TAA8	Amplifiers I - Lecture Professor Edward Lee, <i>Iowa State University</i>
TAA8-1	A High Frequency CMOS current feedback OPAMP Manetakis, Kostas, Imperial College; Toumazou, Chris and Papavassiliou, Christos, Imperial College of Science Technology & Medicine
TAA8-2	A 3-V CMOS Wideband Exponential Control Variable-Gain-Amplifier Huang, Po-Chiun, Chorng-kuang, Wang, and Chieu, Li-Yu, National Central University
TAA8-3	Systematic Generation of Transconductance Based Variable Gain Amplifier Topologies Klumperink, Eric A. M., and Tuijl, Ed J.M., MESA Research Institute, University of Twente
TAA8-4	Low Noise Current-Mode CMOS Transimpedance Amplifier for Giga-bit Optical Communication Toumazou, Chris, Imperial College of Science Technology & Medicine Park, Sung, Imperial College
TAA8-5	A CMOS Automatic Gain Control for Hearing Aid Devices Silva-Martinez, Jose and Salcedo-Suñer, Jorge, I.N.A.O.E.
TAA8-6	CMRR Enhancement Techniques for Current-Mode

TAA8-7 TAA8-8	An Amplifier Design Methodology Derived from a MOSFET Current-Based Model Pinto, Rodrigo Luiz de Oliveira, Universidade Federal de Santa Catarina; Cunha, Ana A., Universidade Federal da Bahia Schneider, Marcio C. and Galup-Montoro, Carlos, Universidade Federal de Santa Catarina A 3-V CMOS Optical Preamplifier with DC Photocurrent Rejection Johns, David A. and Phang, Khoman, University of Toronto
TAA9	Logdomain Filters - Lecture
	Professor Alison Payne,
TA AO 1	Imperial College, London, England A Fully-Programmable Analog Log-Domain Filter
TAA9-1	Circuit
	Roberts, Gordon and Hematy, Arman, McGill University / MACS
	Laboratory
TAA9-2	New fully balanced log-domain integrators El-Masry, Ezz and Wu, Jie, DalTech, Dalhousie University
TAA9-3	Multiple Feedback Log-domain Filters
	Payne, Alison J. and Drakakis, Emmanuel, Imperial College Toumazou, Chris, Imperial College of Science Technology & Medicine
TAA9-4	Synthesis of Distortion Compensated Log-Domain Filters Using State Space Techniques Frey, Doug, Lehigh University
TAA9-5	An Auto-Biased 0.5um CMOS Transconductor for
	Very High Frequency Applications Franca, Jose E.; Garrido, Nuno, and Franca, Jose, Instituto Superior Tecnico
TAA9-6	Noise in high-order log-domain filters Punzenberger, Manfred, Swiss Federal Institute of Technology,
	Lausanne
TAA9-7	Low-Voltage Current-Mode Continuous-Time CMOS IC Filters With Orthogonal w-Q Tuning
	Shana'a, Osama, Stanford University Schaumann, Rolf, Portland State University
TAA9-8	Analysis of noise in translinear filters
	Kouwenhoven, Michiel; Mulder, Jan; Roermund, Arthur H.; van
	der Woerd, Albert C., and Serdijn, Wouter, Delft University of Technology
	0 115 0
TAA10	Oversampled Data Converters - Lecture
	Professor Raymond Chik
TAA10-1	Micro-power sigma-delta A/D-converter Rapakko, Harri, University of Oulu
TAA10-2	An Area-Efficient Sigma-Delta DAC with semidigital
	IFIR reconstruction filter Byung-Moo, <i>LG Semicon Co.,Ltd.</i> ; Kim, Soo-Won; Kim,
	Jae-Wan Kim, and Yoo, Jang-Sik, Korea University
TAA10-3	A 1v CMOS second order sigma-delta modulation Salama, C.Andre T. and Ma, Stanley Jen-Chen, <i>University of Toronto</i>
TAA10-4	Mismatch-Shaping DAC for Lowpass and Bandpass Multi-Bit Delta-Sigma Modulators Schreier, Richard, Analog Devices, Inc.
	Shui, Tao, Oregon State University
TAA10-5	Mismatch Cancellation for Double-Sampling Sigma- Delta Modulators

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TAA8-7

Instrumentation Amplifiers
Koli, Kimmo J. and Halonen, Kari A., Helsinki University of Technology

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TAA10-6	Snelgrove, Martin and Yu, Li, Carleton University Power Optimization of Delta-Sigma Analog-to-Digital Converters Based on Slewing and Partial Settling Considerations
TAA10-7	Naiknaware, Ravindranath and Fiez, Terri S., Washington State University Nonuniform to Uniform Decimation for Delta-Sigma Frequency-to-Digital Conversion Huff, William and Galton, Ian, University of California at San Diego (UCSD)
TAA10-8	A Single-path Multi-bit DAC for A/D Converters Louis, Loai, McGill University Roberts, Gordon, MACS Laboratory, McGill University
TAA11	Digital Signal Processing for Hearing Aids
	- Special Session Professor Neeraj Magotra University of New Mexico
TAA11-1	Recruitment Compensation as a Hearing Aid Signal Processing Strategy Allen, Jont, Bell Labs
TAA11-2	Flexible Filterbank Structure for Extensive Signal Manipulations in digital Hearing Aids Brennan, Robert, Unitron Industries, Ltd.
TAA11-3	Multiband Compression Hearing Aids: Developing a Performance Metric Schmidt, Jon, Resound; Rutledge, Janet, U. of Maryland Medical Center
TAA11-4	Multichannel Compression in the Normal Ear: A Signal Processing Algorithm for the Hearing Impaired Yund, William, VA Medical Center
TAA11-5	Multichannel Adaptive Noise Reduction in Digital Hearing Aids Magotra, Neeraj; Kasthuri, P.; Whitman, R., and Yang, Y., University of New Mexico
TAA11-6	PC Based Auditory Simulation of Hearing Aid Shennib, A., Decibel Instrument
TAA11-7	Development of an Open Platform DSP Hearing Aid Edwards, Brent and Uvacek, Bob, Resound Corporation
TAA12	Analog Cinquit Dogian I sature
IAAI2	Analog Circuit Design - Lecture Professor Chorng-Kuang Wang National Central University, Taiwan
TAA12-1	Statistical Behavioral Modeling and Simulation: Concepts and Techniques Swidzinski, Jan F. and Styblinski, Maciej, Texas A&M University
TAA12-2	Robust Recursive Inverse Approximation and its Application to Parameter Extraction of Behavioral Models
TAA12-3	Xu, Gonggui and Styblinski, Maciej A., Texas A&M University Study of Optimal Importance sampling in Monte Carlo Estimation of Average Quality Index Kielbasa, R. and Keramat, Mansour, Ecole Superieure d'Electricite (SUPELEC)
TAA12-4	Worst-Case Analysis of Linear Analog Circuits Using Sensitivity Bands Shi, Richard and Tian, Michael, University of Iowa
TAA12-5	Fast time domain noise simulation of sigma-delta converters and periodically switched linear circuits Dong, Yikui and Opal, Ajoy, University of Waterloo

TAA12-6	Efficient Utilization of On-chip Inductors in Silicon RF IC Design Using a Novel CAD Tool; the LNA
	Paradigm Papananos, Yannis and Koutsoyannopoulos, Yorgos K., National Technical University of Athens
TAA12-7	Optomega Keramat, Mansour, Ecole Superieure d'Electricite (SUPELEC)
TAA12-8	AC Constraint Transformation for Top Down Analog
	Design Malavasi, Enrico, <i>Cadence Design Systems</i>
	Arsintescu, Bogdan, Delft University of Technology
TAA13	Adaptive Signal Processing I - Poster
	Professor Paulo S. Diniz
	Federal University of Rio de Janiero
TAA13-1	A New Delayless Subband Adaptive Filter Structure Merched, Ricardo; Diniz, Paulo S., and Petraglia, Mariane R, Federal University of Rio de Janeiro
TAA13-2	On the Design of the Target-Signal Filter in Adaptive
	Beamforming
	Joho, Marcel and Moschytz, George S., Swiss Federal Institute of Technology
TAA13-3	A New Modified Variable Step Size for the LMS
	Algorithm Itoh, Yoshio and Fukui, Yutaka, Tottori University
	Kobayashi, Masaki, <i>Ibaraki University</i>
	Okello, James and Nakanishi, Isao, Tottori University
TAA13-4	Adaptive prediction of sample values for digital transducers
	Tröster, Gerhard; Thaler, Markus, and Hölling, Matthias, Swiss
TA 412.5	Federal Institute of Technology (ETH)
TAA13-5	A DSP-Based Modular Architecture For Noise Cancellation and Speech Recognition
	Nieto-Lluis, Victor; Alvarez-Marqui, Agustin; Gomez-Vilda,
	Pedro; Rodellar-Biarge, Maria-Victoria; Perez-Castellanos, Maria- Mercedes; Martinez-Olalla, Rafael, <i>Universidad Politécnica de Madrid</i>
TAA13-6	An Efficient Approach to Noise Suppression in
	Adaptive Filtering Subject to Output Envelope
	Constraints Zheng, Wei Xing, University of Western Sydney, Nepean
TAA13-7	A Feedback ANC System Using Adaptive Lattice
	Filters
	Yau, Sze Fong and Yeung, Tak Keung, The Hong Kong University of Science and Technology
TAA13-8	Pipelining of 2-Dimensional adaptive filters based on
	the LDLMS algorithm Kiya, Hitoshi, Tokyo Metropolitan University; Nishikawa,
	Kiyoshi and Kimijima, Tadaaki, Graduate School of Engineering, Tokyo Metro. Univ.
TAA13-9	Transform-domain delayed LMS algorithm and
	architecture Wu, An-Yeu, National Central University
TAA13-10	Generalization of Exponentially Weighted RLS
	Algorithm Using a State-Space Model Kim, Beomsup; Lee, Yong H., and Chun, Byungjin, Korea Advanced Institute of Science and Technology
TAA13-11	Adaptive Spectral Estimation Based on an EXP Model Tokuda, Keiichi, and Junibakti, Sanubari, Satyawacana University
TAA13-12	LMS/LMF and RLS Volterra System Identification
	based on Nonlinear Wiener Model
	Chang, Shue-Lee and Ogunfunmi, Tokunbo, Santa Clara

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University

TAA14	VLSI II - Poster
	Dr. Sudhakar Muddu, Silicon Graphics, Inc.
TAA14-1	Synthesis of Critical ASICs with Embedded Fully
	Concurrent Fault Resilience
	Orailoglu, Alex and Hamilton, Samuel N., University of
	California, San Diego
TAA14-2	A Low-Power GaAs MESFET Dual-Modulus
	Prescaler
TAA14-3	Kanan, Riad, Swiss Federal Institute of Technology (EPFL) A Noise-Based Random Bit Generator IC for
1AA14-3	Applications in Cryptography
	Connelly, Joseph A. and Petrie, Craig S., Georgia Institute of
	Technology
TAA14-4	A Metal-Mask Programmable 2.5V 100MHz 682-Term
	PLA with 700mV-Swing Output Plane
	Nicol, Chris J. and Singh, Kanwar J., Lucent Technologies
TAA14-5	44Gbit/s 4:1 Multiplexer and 50Gbit/s 2:1 Multiplexer
	in pseudomorphic AlGaAs/GaAs-Hemt Technology
	Nowotny, Ulrich and Lao, Z., Thiede, A., Lienhart, H., Hornung, J., Kaufel, G., Kohler, K., and Glorer, K., Fraunhofer-Institut
	Angewandte Festkörperphysik
TAA14-6	Floating-Gate CMOS Analog Memory Cell Array
	Harrison, Reid R., California Institute of Technology
	Hasler, Paul, Georgia Institute of Technology
	Minch, Bradley A., Cornell University
TAA14-7	The most resistive model for the MOS resistive circuit
	Osa, Juan I.; Carlosena, Alfonso, and Porta, S., Universidad Publica de Navarra
TAA14-8	Novel Input ESD Production Circuit with Substrate-
	Triggering Techneque in a 0.25-mm Shallow Trench-
	instalation CMOS Technology
	Wu, C., City University of Hong Kong
	Su, Yih-Ming, National Cheng Kung University
	Ker, Ming-Dou, National Chiao-Tung University Chen, Pei-Yin, National Cheng Kung Univ.
	Sun, Tao, Oregon State University
TAA14-9	Dynamic-Floating-Gate Design for OutPut ESD
	Protection in a 0.35-um CMOS Cell Library
	Ker, Ming-Dou, Industrial Technology Research Institute (ITRI)
	Tsao, YF., Wang, Chen-Chia, Yeng, Horng-Ru and Chang,
	Hun-Hsien, Taiwan Semiconductor Manufacturing Company
	Wang, Michelle, University of Southern California Chang, Pen-Yiing, National Tsing-Hua University
TAA14-10	Fully Integrated Readout Channel with Amplitude and
11111111	Time Measurement for AMS Experiment of ISSA
	Castello, R.; Boella, G.; Baschirotto; Andrea, Frattini, G.; Pessina,
	G., and Rancoita, P.G. Universita'di Pavia
TAA14-11	Optimum SNS to Binary Conversion Algorithm and
	FPGA Realization
	Pace, P.E.; Ringer, W.P., and Styer, D., Naval Postgraduate School
TAA14-12	Switched-Capacitor Interpolator for Direct-Digital
	Frequency Synthesizers
	Franca, Jose E. and Santos, Paulo J., Instituto Superior Tecnico

TAA15 CAD I - Poster

Professor Douglas J. Fouts

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	Naval Postgraduate School
TAA15-1	Maximally Routable Switch Matrices for FPD Design Chang, Yao-Wen and Wu, Guang-Min, National Chiao Tung University
TAA15-2	Fault Emulation with Optimizes Assignment of Circuit Nodes to Fault Injectors Sedaghat-Maman, Reza, University of Hanover
TAA15-3	State-space Technique for Minimal Realisation of
	Analogue Circuits and Systems Arslan, Tughrul, Cardiff University of Wales Kadim, H.J., Hull University
TAA15-4	Precise-MD: A Software Tool for Resources
	Constrained Hua, Jia; Halverson, Ranette H.; Passos, Nelson L., and Rashid, Obaidur, Midwestern State University
TAA15-5	Redesignability Analysis of Digital Circuits with
171713-3	Incomplete Implementation Information Wey, Chin-Long and Khalil, Mohammad A., Michigan State University
TAA15-6	Fuzzy Multiobjective Decision Making On Modeled VLSI Architecture Concepts Jeschke, Hartwig, University of Hannover
TAA15-7	parallel coprocessor architectures for molecular
1AA13-7	dynamics simulation: a case study in design space exploration Gerber, Martin, Federal Institute of Technology (ETH)
TAA15-8	Dual Edge Operations in Reduced Ordered Binary
	Decision Diagrams Miller, Michael, University of Victoria Drechsler, Rolf, Albert-Ludwigs-University
TAA15-9	ROBDD as a recursively defined periodic bit-string Lee, Seong-Bong, ETRI
TAA15-10	Generation of Quasi-optimal FBDDs through Paired Haar Spectra
TAA15-11	Falkowski, Bogdan, Nanyang Technological University; Chang, Chip-Hong, Nanyang Polytechnic, French Singapore Institute,
1AA15-11	Calculation of paired Haar Spectra for Systems of
	Incompletely Specified Boolean Functions Chang, Chip-Hong, Nanyang Polytechnic, French Singapore Institute; Falkowski, Bogdan, Nanyang Technological University
TAA15-12	Pseudo-Symmetric Functional Decision Diagrams Chrzanowska-Jeske Malgorzata, Portland State University
TAA15-13	A new Lock based State Coding Methodology for Signal Transition Graphs
m	Nagalla, Radhakrishna, University of New South Wales
TAA15-14	Multi-input/multi-output Block diagram grammar Tsuchida, Kensei; Adachi, Yoshihiro, and Kobayashi, Suguru, Toyo University
TAA15-15	Improved Minimization Methods of Pseudo Kronecker Expressions for Multiple Output Functions Drechsler, Rolf and Becker, Bernd, Albert-Ludwigs-University Lindgren, Per, Lulea University
TAA15-16	Computational experience with a primal-dual interior point method for smooth convex placement problems Frazer, Mark, University of Waterloo Vannelli, Anthony, University of Waterloo
TAA15-17	Kennings, Andrew A., Ryerson Polytechnic University An Initial Placement Algorithm for 3-D VLSI Ohmura, Michiroh, Hiroshima Institute of Technology
TAA15-18	A Novel Methodology for Power Consumption Reduction in a Class of DSP Algorithms
	Merakos, Panagiotis; Masselos, Konstantinos; Goutis, Costas, and Stouraitis, Thanos, <i>VLSI Design Laboratory</i>

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TAA15-19	Performance Modeling For System Design: An MPEG
	A/V Decoder Example
	Hung, Ching-Yu; Hocevar, Dale E., and Sriram, Sundararanjan,
	Texas Instruments, Inc.
TAA15-20	An Efficient Compiled Simulation System for VLIW
	Code Verification
	Sung, Wonyong and Ahn, Jae-Woo, Seoul National University
TAA15-21	Graph Transformation for Communication
	Minimization Using Retiming
	Sha, Edwin; Chen, Fei; Sheliga, Michael, and Yu, Zhihong,
	University of Notre Dame
TAA15-22	Gate to Channel Shorts in PMOS Devices
	Sayeed, M. Shaheen and Mourad, Samiha, Santa Clara University
TAA15-23	Realistic Delay Modeling in Satisfiability-Based
	Timing Analysis-Extended Abstract
	Silva, Luis G., Instituto Superior Tecnico/INESC
	Sakallah, Karem A., University of Michigan
	Silva, Joao and Silveira, Luis, Instituto Superior Tecnico/INESC
TAA15-24	Enhancing Circuit Preformance Under a Multiple-
	Phase Cloacking Scheme
	Hsu, Yaun-chung, IBM; Sun, Tao, Oregon State
	University; Du, X., Northern Jion-Tong Univ.

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Programmable Logic Devices - Lecture

TAB6

	Professor John I. Sewell, <i>University of Glasgow</i>
TAB6-1	A Three-Dimensional FPGA with an Integrated
	Memory for In-Application Reconfiguration Data
	Chiricescu, Silviu and Vai, Mankuan, Northeastern University
TAB6-2	PARC: Pyramidal Architecture Dedicated
	to Fast Dynamic Configuration
	Applications
	Rabel, Claude Eddy, Ecole Polytechnique de Montreal
TAB6-3	VLSI Design of A 1.0 Ghz 0.6-um 8-Bit CLA Using
	PLA-styled All-M-Transistor Logic
	Tsai, KC. and Wang, Chua-Chin, National Sun Yat-Sen Univ.
TAB6-4	Thermal Testing on Programmable Logic Devices
	Boemo, Eduardo and Buedo, Universidad Autonoma Madrid
TAB13	DSP Implementations - Poster
111210	Professor Keshab Parhi, <i>University of Minnesota</i>
TAB13-1	16-point high speed (I)FFT for OFDM modulation Salsano, Adelio; Salmeri, Marcello; Bertazzoni, Stefano, and Iannuccelli, Manuele, University of Rome "Tor Vergata"
TAB13-2	
1AD13-2	Use of the Chinese Abacus Method for Digital Arithmetic Functions
	Maloberti, Franco and Chen, Gang, University of Pavia
TAB13-3	Residue to Binary Number Converters for Three
TABIS-S	Moduli Set
	Swamy, M.N.S. and Wang, Yuke, Concordia University
TAB13-4	A Hybrid Low-latency Serial-Parallel Multiplier
	Bouridane, Ahmed; Ashur, Ahmed; Al-Besher, Badr, and
	Crookes, Danny, The Queen's University of Belfast
TAB13-5	Efficient prime factor decomposition algorithm and
	address generation techniques for the computation of
	discrete cosine transform
	Lun, Pak-Kong and Siu, Wan-Chi, Hong Kong Polytechnic University; Chau, Lap-Pui, Nanyang Technological University
	Oniversity, Chan, Emp I at, transfully Technological University

TAB13-6	A CORDIC Algorithm with Fast Rotation Prediction
	and Small Iteration Number
	Lin, Chun-Fu, Vanguard International Semiconductor Corp.
	Chen, Sau-Gee, National Chiao Tung University
TAB13-7	Efficient Algorithms for Binary Logarithmic
	Conversion and Addition
	Wey, Chin-Long and Wan, Yi, Michigan State University
TAB13-8	High Level Performance Estimation for a Primitive
	Operator Filter FPGA
	Eskikurt, Halil, Ibrahim School of Engineering,
	Arslan, Tughrul, Cardiff University of Wales
TAB13-9	Direct Digital Frequency Synthesis Using a Modified
111010	CORDIC
	Daneshrad, Babak and Grayver, Eugene, UCLA
TAB13-10	High-Speed Cordic Based Parallel Weight Extraction
1AD13-10	
	For QRD-RLS Adaptive Filtering
	Parhi, Keshab K. and Ma, Jun, University of Minnesota
T . D	Deprettere, Ed F., Delft University of Technology
TAB13-11	Design and Application of Efficient Optimum Power
	Estimator Based on Wiener Model for Complex-
	Valued Signals
	Hartimo, Iiro O.; Tanskanen, Jarno, and Huang, Aiping, Helsinki
	University of Technology
TAB13-12	An Implementation of a Normalized ARMA Lattice
	Filter with a CORDIC Algorithm
	Kitajima, Hideo; Shiraishi, Shin-ichi, and Haseyama, Miki,
	Hokkaido University
TAB14	Circuits and Power Systems II - Poster
TAB14	
TAB14	Professor Krishnaiyan Thulasiraman
	Professor Krishnaiyan Thulasiraman University of Oklahoma
TAB14 TAB14-1	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse
	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response
	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical
TAB14-1	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical Engineering and Computing, Croatia
	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical Engineering and Computing, Croatia The Formulation and Implementation of an
TAB14-1	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical Engineering and Computing, Croatia
TAB14-1	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical Engineering and Computing, Croatia The Formulation and Implementation of an
TAB14-1	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical Engineering and Computing, Croatia The Formulation and Implementation of an Analog/Digital Control System for a 100KW DC-to-
TAB14-1	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical Engineering and Computing, Croatia The Formulation and Implementation of an Analog/Digital Control System for a 100KW DC-to- DC Buck Chopper
TAB14-1	Professor Krishnaiyan Thulasiraman University of Oklahoma A Class of Systems with Symmetric Impulse Response Vucic, Mladen and Babic, Hrvoje, Faculty of Electrical Engineering and Computing, Croatia The Formulation and Implementation of an Analog/Digital Control System for a 100KW DC-to- DC Buck Chopper Mak, Chi, Poer Paragon Inc.; Ashton, Robert and Ciezki, John
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	Enhancement of Small Signal Stability in Power
	Systems
	Sanchez, E.; Begovich, O., and Messina, A.R., Cinvestav, IPN
TAB14-8	PLD Implementation of Control Algorithms: Design
	and Validation
	Lazzaroni, M.; Carmeli, S., and Monti, Antonello, Dipartmento di
	Elettrotecnica
TAB14-9	Time-Domain Analysis for Reflection Characteristics
	of tapered and Stepped Nonuniform Transmission
	Lines
	Murakami, Kazuhito and Ishii, Junya, Kinki University
TAB14-10	A Unified Method for the Small-Signal Modelling of
	Multi-Resonant and Quasi-Resonant Converters
	Kasnsara, M.; Ward, E.S., and Szabo, Adrian, The Nottingham
	Trent University
TAB14-11	The application of feedback linearization techniques to
	the stabilization of DC-to-DC converters with constant
	power loads
	Ciezki, John, G. and Ashton, Robert, Naval Postgraduate School
TAB14-12	Highly Efficient CMOS Class E Power Amplifier for
	Wireless Communications
	Tu, Steve Hung-Lung, Imperial College of Science, Technology &
	Medicine

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TPA1	Adaptive Signal Processing II - Lecture
	Professor M.N.S. Swamy
	Concordia University, Montreal
TPA1-1	A New Adaptive Algorithm for Reducing the
	Hardware Complexity
	Lee, Haeng Woo, ETRI
TPA1-2	A New Approach to Least-Squares Adaptive Filtering Kocal, Osman H., Istanbul Technical University
TPA1-3	Regressor Based Adaptive Infinite Impluse Response
	Filtering
	Arikan, Orhan, Bilkent University
TPA1-4	Simplified Realization of Cascaded Adaptive Notch
	Filters Using Complex Coefficients
	Nishimura, Shotaro, Shimane University; Jiang, Hsin-Chin,
	Institute of Electronics, National Chiao-Tung University

Special Session Professor Weiping Li, Lehigh University Dr. Joern Ostermann, AT&T Laboratories TPA2-1 Coding of Arbitrarily Shaped Objects with Binary and Greyscale Alpha-Maps: What Can MPEG-4 Do for You? Ostermann, Joem, AT&T Labs - Research Schmidt, Jon, Resound TPA2-2 Predictive Shape Coding Using Generic Polygon Approximation Kim, Jong-il and Evans, B.L., University of Texas at Austin TPA2-3 Shape Adaptive Wavelet Coding

Wu, C., City University of Hong Kong

Coding of Arbitrarily-Shaped Objects -

Li, S., Sarnoff Corporation; Sun, Tao, Oregon State University

TPA2

TPA2-4	Joint Shape and Texture Rate Control for MPEG-4 Encoders Sun, Tao, Oregon State University; Vetro, A., Mitsubishi Electric
TPA2-5	Wang, Yao, Polytechnic University Rate-Distortion Optimal Boundary Encoding Using an Area Distortion Measure Katsaggelos, A.K.; Melnikov, G., and Karunaratne, P., Northwestern University; Schuster, G., 3COM
TPA3	Neural Networks II: Implementation Issues
	- Lecture
	Professor G. Cauwenberghs
	John Hopkins University
TPA3-1	Continuous-Time Feedback in Floating-Gate MOS
	Circuits Minch Brodley A. Comell University
	Minch, Bradley A., Cornell University Diorio, Chris, University of Washington
	Hasler, Paul E., Georgia Institute of Technology
TPA3-2	An analog neural network circuit with simultaneous
	perturbation learning rule
TPA3-3	Maeda, Yutaka and Kanata, Yakichi, Kansai University
11'A3-3	A self-organizing map with resistive fuse Katayama, Kousuke; Saito, Toshimichi, and Kawahara, Shingo,
	Hosei University
TPA3-4	Accuracy vs. Precision in General purpose Neural
	Digital VLSI Architectures
	Alippi, Cesare and Briozzo, Luciano, CNR-CESTIA
TPA4	Image and Video Porcessing II – Lecture
	Professor Chung-Lin Huang
	National Tsing Hua University
	Professor Mohammed Ismail, Ohio State University
TPA4-1	A Fully Parallel Analog Median Filter
	Sanchez-Sinenci, Edgar, Texas A&M University
	Lopez, Antonio, Universidad Publica de Navarra
	Diaz-Sanchez, Alejandro, New Mexico State University Ramirez-Angulo, Jaime, New Mexico State University
TPA4-2	VLSI Implementation of Decoder for decompressing
	fractal-based compressed image
	Kim, Kyung-Hoon; Hong, Chang-Yu, and Kim, Leesup, Korea
TTD 1 4 2	Advanced Institute of Science and Technology
TPA4-3	Fast Integrated Algorithm and Implementations for
	the Interpolation and Color Correction of CCD-Sensed Colored Signals
	Chen, Sau-Gee, National Chiao Tung University
TPA4-4	Genetic Algorithms for Active Contour Optimization
	MacEachern, Leonard, University of Waterloo
TPA5	Signal Processing for Communications II –
	Lecture
	Professor R. Clark Robertson
TD 4.5. 1	Naval Postgraduate School
TPA5-1	A new processor architecture dedicated to digital modem applications
	Monteiro, Fabrice; Philip, Serge; Dandache, Abbas, and Lepley,
	Bernard, University of Metz
TPA5-2	A GSM Modulator Using a Delta-Sigma Frequency

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	Discriminator Based Synthesizer
TPA5-3	Bax, Walt T. and Copeland, Miles A., Carleton University Error resilient transmission of H.263 coded video over wireless networks Ben Letaief, Khaled; Lu, Jianhua, and Liou, Ming L., The Hong Kong University of Science & Technology
TPA5-4	Discrete fractional hilbert transform Yeh, Man-hung and Pei, Soo-chang, National Taiwan University
TPA6	Circuits and Systems for Communication Networks I - Lecture
	Professor Magdi Bayoumi
	University of Southwestern Louisiana
TPA6-1	A Low-Power VLSI Design Methodology for High Bit- Rate Data Communications over UTP Channel Shanbhag, Naresh and Goel, Manish, University of Illinois at Urbana-Champaign
TPA6-2	VLSI Design of an ATM Switch with Automatic Fault Detection Tsui, Chi-ying and Kwan, Louis C. Y., Hong Kong University of Science and Technology
TPA6-3	Implementation of ATM OAM Functions for the Integrated Service Access Network
TPA6-4	Lee, Sang-Ho, Electronics and Telecommunication Research Inst. A Signaling Protocol Architecture for an ATM Mobile Simulator Yoo, Jea-Hoon and Yoo, Jeang-Ju, ETRI(Electronics and Telecommunications Research I
TPA7	Analog VLSI - Lecture
	Professor Yoji Kajitani
	Tokyo Institute of Technology
TPA7-1	Mutual synchronization in 4 coupled oscillators with different natural frequencies Sasase, Iwao, Keio University Mori, Shinsaku, Nippon Institute of Technology More Scilibilia (Friday
TPA7-2	Moro, Seiichiro, Keio University Short-Period Oscillations from a Sigma-Delta Modulator
TPA7-3	Davies, Anthony C., King's College London Spatiotemporal Dynamics of a Stochastic VLSI Array Neff, Joseph D. and DeWeerth, Stephen P., Georgia Institute of Technology
TPA7-4	IC Implementation of a Current-Mode Chaotic Neuron Suyama, Ken; Horio, Yoshihiko, and Herrera, Ruben, Columbia University
трап	Communicating with Chass H. Gard
TPA9	Communicating with Chaos II - Special Professor Michael Peter Kennedy University College Dublin
TPA9-1	Communicating via Chaos Synchronization Generated by Noninvertible Maps Mira, Christisn ,Millerioux, G., INSA Toulouse
TPA9-2	From Chaotic Maps to Encription Schemes Parlitz, U., Goettingen; Kocarev, L. and Stojanovski, T., RMIT Jakimoski, G., Sts. Cyril and Methodius
TPA9-3	Chaotic Versus Classical Stream CiphersA

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TPA9-4	Comparative Study Vandewalle, J., KU Leuven; Kelber, K.; Dachselt, F., and Schwarz, W., Technical University of Dresden Some tools for Attcking Secure Communication Systems Emplying Chaotic Carriers Ogorzalek, M., AGH; Dedieu, H., EPFL
TPA10	Circuit Simulation - Lecture Professor Michel Nakhla
TPA10-1	Carleton University, Canada Application of the Variable Dimension Newton Method to LArge Scale Circuits Ng, Shek-Wai, The Hong Kong Polytechnic
TPA10-2	HomSPICE: Simulator with Homotopy Algorithms for Finding DC and Steady State Solutions of Nonlinear Circuits
TPA10-3	Trajkovic, Ljiljana; Fung, Eula, and Sanders, Seth, Univ. of Calif. Convergence Conditions of Waveform Relaxation Methods for Circuit Simulation Wing, Omar, Chinese University of Hong Kong
TPA10-4	Jiang, Yao-lin, Xian Jiao Tong University A time-frequency algorithm for the simulation of the initial transient response of oszillators Laur, Rainer A.; Brachtendorf, H. G.; Welsch, G., University of Bremen
TPA11	Robotics - Lecture Professor David C. Jenn Naval Postgraduate School Professor Teodiano F. Bastos
TPA11-1	Universidade Federal do Espirito Santo Wireless Power Transfer (WPT) for Micro-Remotely Piloted Vehicle (MRPV) Vitale, Robert L. and Jenn, David C., Naval Postgraduate School
TPA11-2	Sliding mode control for elastic multi-link manipulators based on the dynamic compensation method.
TPA11-3	Utkin, Victor, Institute of control ciences New Broadband 100-MBPS System Using Broadband Pin-Board Switch and High-Presision Pin-Handling Technology Yoshizawa, Takashi; Inagaki, Shuichiro, and Kobayashi, Keiichi, NTT Opto-Electronics Laboratories
TPA11-4	An Agent-Based Structure For Mobile Robots Using Vision And Ultrasonic Sensors Bastos, Teodiano F. and Sarcinelli-Filho, Mario, Federal University of Espirito Santo
TPA12	Feedback Systems and Stability - Lecture Professor Bell A. Shenoi, Wright State University
TPA12-1	A General Operating-Point Instability Test Based on Feedback Analysis
TPA12-2	Fox, Robert, University of Florida A 3.3V All Digital Phase Locked Loop with Small DCO Hardware and Fast Phase Lock Chaing, Jen-Shiun, Tamkang University
TPA12-3	Chen, Pei-Yin, National Cheng Kung Univ. A Novel Algorithm that Finds Multiple Operating Points of Nonlinear Circuits Automatically

	Goldgeisser, Leonid B. and Green, Michael, Univ. of California,
	Irvine
TPA12-4	An Extension of the Classical Feedback Theory
11/112-4	Neag, Marius, University of Limerick
TPA13	Multimedia Processing - Poster
	Professor Che-Ho Wei
	National Chiao Tung University, Taiwan
	Professor Yeong Ho Ha
	Kyungpook National University, Korea
TPA13-1	An LPC Cepstrum Processor for Speech Recognition Kim, SooWon; Kim, YoungWoo; Hwang, Inchul, and Kim,
TD 4 12 2	SungNam, Korea University
TPA13-2	A Visual Model for Subband Image Coding Chan, Shing-chow; Fong, W. C., and Ho, K. L., University of Hong Kong
TPA13-3	A fast and accurate scoreboard algorithm for
	estimating stationary backgrounds in an image
	sequence
	Yung, H. C. Nelson and Lai, Hon Seng, University of Hong Kong
TPA13-4	Novel Subimage Error Concealment Techniques
	Suitable for the ATM Environment
	Sharaf, Atif I.; Marvasti, Farokh A., and Hasan, Moh'd A., King's
TPA13-5	College University of London Wipe Scene Change Detector for Segmenting
11 A13-3	Uncompressed Video Sequences
	Alattar, Adnan, King Fahd University of Petroleum & Minerals
TPA13-6	Hierarchical Scene Change Detection in an MPEG-2
	Compressed Video Sequence
	Kim, Jae-Gon, ETRI
TPA13-7	A Robust Linear Prediction Method for Noisy Speech
	Suzuki, Jouji; Shimamura, Tetsuya, and Kunieda, Nobuyuki,
	Saitama University
TPA13-8	Object tracking hypermedia links creation in MPEG-2
	digital video sequences
TPA13-9	Favalli, Lorenzo; Mecocci, O., Moschetti, F., University di Pavia
1FA15-9	Syntax Based Error Concealment Papadakis, Vasilios; Lynch, William, and Le-Ngoc, Tho,
	Concordia University
TPA13-10	Digital Restoration of painting cracks
	Giakoumis, Ioannis and Pitas, Ioannis, Aristotle Univ. of
	Thessaloniki
TPA14	Oversampled and Sigma-Delta Techniques I
	- Poster
	Professor Teri Fiez, Washington State University
TPA14-1	Harmonic Distortions in Switched-Current Sigma-
	Delta Modulators due to Clock Feedthrough
	Martins, Jorge and Dias, Victor F., Instituto Superior Técnico
	/INESC
TPA14-2	Analysis of the non-uniform samplings in SD-
	modulated signals
	Lee, Eel-wan, Seoul National University
TPA14-3	New analytical model of interpolation waveforms in
	time-averaging interpolative digital to analogue
	converters
	Moniri, Mansour, Staffordshire University
TPA14-4	Encoding Hidden Data Channels in Sigma Delta
	Bitstreams
	Sandler, Mark B. and Magrath, Anthony J., King's College,

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	London University
TPA14-5	An Architecture of Delta-Sigma A-to-D Converters
	using a Voltage Controlled Oscillator as a Multi-bit
	Ouantizer
	Sakimura, Noboru; Morie, Takashi; Iwata, Atsushi, and Nagata,
	Makoto, Hiroshima University
TPA14-6	Current mode approach to sigma-delta modulators
	Suszynski, Robert and Wawryn, Krzysztof, Technical University
	of Koszalin
TPA14-7	A Folding ADC Employing a Robust Symmetrical
	Number System with Gray-Code Properties
TD 4 1 4 0	Pace, P.E.; Styer, D., and Akin, I.A, Naval Postgraduate School
TPA14-8	Performance Analysis of Low Oversampling Ratio
	Sigma-Delta Noise Shapers for RF Applications Tenhunen, Hannu and Gothenberg, Andreas, Royal Institute of
	Technology
TPA14-9	Adaptive Compensation of Analog Circuit
	Imperfections for Cascaded Delta-Sigma ADCs
	Temes, Gabor C.; Wiesbauer, Andreas, and Sun, Tao, Oregon
	State University
TPA14-10	A Two-Loop Third-Order Multistage Delta Sigma
	Frequency to Digital Converter
	Riley, Tom; Filiol, Norm; Plett, Calvin, and Copeland, Miles A.,
TTD 1 4 4 4 4	Carleton University
TPA14-11	An Oversampled A/D Converter Using Cascaded
	Fourth Order Sigma-Delta Modulation and Current
	Steering Logic
	Miao, Guoqing, Crosslink Semiconductor, Inc.; Yang, Y., University of New Mexico; Tang, Pushan, Fudan University,
TPA14-12	A 12-bit,100ns/b,1.9mW CMOS Switched-Current
11 A14-12	Cylic A/D Converter
	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University
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TPA15	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University
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TPA15	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky
	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta
TPA15	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position
	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors
	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe
TPA15-1	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors
TPA15-1	Wey, Chin-Long and Wang, Jin-sheng, Michigan State University Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu
TPA15-1	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration
TPA15-1 TPA15-2 TPA15-3	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München
TPA15-1 TPA15-2	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS
TPA15-1 TPA15-2 TPA15-3	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology
TPA15-1 TPA15-2 TPA15-3 TPA15-4	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta
TPA15-1 TPA15-2 TPA15-3	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for
TPA15-1 TPA15-2 TPA15-3 TPA15-4	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring
TPA15-1 TPA15-2 TPA15-3 TPA15-4 TPA15-5	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia
TPA15-1 TPA15-2 TPA15-3 TPA15-4	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia A Multi-mode X-ray Imager for Medical and
TPA15-1 TPA15-2 TPA15-3 TPA15-4 TPA15-5	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia
TPA15-1 TPA15-2 TPA15-3 TPA15-4 TPA15-5	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia A Multi-mode X-ray Imager for Medical and Industrial Applications Colbeth, Richard, Varian Imaging Products Novel Low Power Class-B Output Buffer
TPA15-1 TPA15-2 TPA15-3 TPA15-4 TPA15-5 TPA15-6	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia A Multi-mode X-ray Imager for Medical and Industrial Applications
TPA15-1 TPA15-2 TPA15-3 TPA15-4 TPA15-5 TPA15-6 TPA15-7	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia A Multi-mode X-ray Imager for Medical and Industrial Applications Colbeth, Richard, Varian Imaging Products Novel Low Power Class-B Output Buffer
TPA15-1 TPA15-2 TPA15-3 TPA15-4 TPA15-5 TPA15-6	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia A Multi-mode X-ray Imager for Medical and Industrial Applications Colbeth, Richard, Varian Imaging Products Novel Low Power Class-B Output Buffer Yu, Pang-Cheng, National Chiao-Tung University Wu, C., City University of Hong Kong A novel image sensor with flexible sampling control
TPA15-1 TPA15-2 TPA15-3 TPA15-4 TPA15-5 TPA15-6 TPA15-7	Sensors and Related Circuits - Poster Dr. Richard Colbeth, Varian Imaging Products Professor Igor M. Filanovsky University of Alberta CMOS N-well and Pinched-well Tetra-lateral Position Sensitive Detectors Chowdhury, Mohamed F, LSI Logic Europe High performance CMOS Ruotsalainen, Tarmo J.; Makynen, Anssi J.; Kostamovaara, Juha T., and Rahkonen, Timo E., University of Oulu The transistor as thermal sensor without calibration Kanoun, Olfa, Universität der Bundeswehr München Two Temperature Sensors Realized in BiCMOS Technology Filanovsky, Igor, University of Alberta A CMOS Integrated Infrared Radiation Detector for Flame Monitoring Malcovati, Piero and Maloberti, Franco, University of Pavia A Multi-mode X-ray Imager for Medical and Industrial Applications Colbeth, Richard, Varian Imaging Products Novel Low Power Class-B Output Buffer Yu, Pang-Cheng, National Chiao-Tung University Wu, C., City University of Hong Kong

TUESDAY – June 2, 1998

(Afternoon)

W	EDNESDAY – June 3, 1998 (Morning)
TPA15-9	A 128x128 Imaging Array Using Lateral Bipolar Phototransistors in a Standard CMOS Process Sandage, Robert and Connelly, Joseph A., Georgia Institute of Technology
TPA15-10	Single Chip CMOS Image Sensors for a Retina Implant System Kneip, T.; Schwarz, Markus; Hauschild, R.; Hosticka, B.J.; Huppertz, J.; Mokwa, W., Trieu, H. K., and Kolnsberg, S. Fraunhofer-Institute of Microelectronics Circuits
TPA15-11	An Analog VLSI Velocity Sensor Using the Gradient Method Deutschmann, Rainer A., Walter Schottky Institute Koch, Christof, Caltech
TPA15-12	A Single Fourier Series Technique For the Simulation and Analysis of Asynchronous Pulse Width Modulation in Motor Drive Systems Guinee, Richard A., Cork Institute of Technology Lynden, C, University College Cork

TUESDAY – June 2, 1998 (Afternoon)

TPB1	PANEL DISCUSSION I
	Government Funded Research

TPB2 PANEL DISCUSSION II Teaching of Circuits and Systems in the 21st Century

Adaptive Signal Processing III - Lecture

WEDNESDAY – June 3, 1998 (Morning)

WAA1

	Professor A. Antoniou, <i>University of Victoria</i>
WAA1-1	DOA Estimation of Speech Source with Microphone
	Arrays
	Jian, Ming and Kot, Alex C., Nanyang Technological University
WAA1-2	Two New Model Order Selection Approaches for
	ARMA System Modeling Using The Two Dimensional
	Frequency Domain Least Square Algorithm
	Mikhael, Wasfy B. and Zhang, Qingwen, University of Central
	Florida; Roman, Jaime R. and Davis, Dennis, Scientific Studies
	Corp.
WAA1-3	An algorithm-based fault-tolerant method for the 2-D
	LMS adaptive algorithm
	Jenkins, Kenneth and Schmitz, Christopher D., University of
	Illinois
WAA1-4	An Adaptive Kalman Filter for the Enhancement of
	Noisy AR signals
	Doblinger, Gerhard, Vienna University of Technology
WAA1-5	Acceleration of Normalized Adaptive Filtering Data-
	Teusing Methods using the Tchebyshev and Conjugate
	Gradient Methods
	Soni, R.A., University of Illinois at Urbana-Champaign
WAA1-6	An Adaptive Beamspace Algorithm for Mobile
	Satellite Communications Systems using Orthogonal
	Waveforms and Convolutional Codes

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	Terry, John and Williams, Douglas, Georgia Institute of Technology
WAA1-7	On Unbiased Adaptive IIR Filtering Algorithms
*********	Diniz, P.S., Prog.de Engenharia Electrica
	Donate, P.D. and Cousseau, J.E., Universidad Nacional del Sur
WAA1-8	A context based lossless compression algorithm for
	ionogram data
	Deng, Guang; Devlin, John C., and Ye, Hua, La Trobe University
WAA2	Steerable Filters and Applications - Special
	Professor Vedat Tavsanoglu, Southbank University
WAA2-1	Steerable Pyramid Filters for Image Enhancement
	Applications
	Schulze, Mark and Castleman, Kenneth, Perceptive Scientific
WAA2-2	Instruments, Inc.; Wu, C., City University of Hong Kong Simplified Design of Steerable Pyramid Filters
WAAZ-Z	Schulze, Mark, Perceptive Scientific Instruments, Inc.
	Wu, C., City University of Hong Kong
	Castleman, Kenneth, Perceptive Scientific Instruments, Inc.
WAA2-3	Mutlirate Separable Implementation of Steerable
	Filter Banks
	Perona, Pietro, California Institute of Technology
WAA2-4	Manduchi, Roberto, Apple Computer, Inc. A common framework for steerable filters, motion
vv AA2-4	estimation, and invariant feature detection
	Teo, Patrick, Stanford University; Hel-Or, Yacov, HP Labs
WAA2-5	Handwritten Character Recognition Using Steerable
	Filters and Neural Networks
	Talleux, Samuel, Hochschule Bremen; Tufan, Emir, University of
	Istanbul; Tavsanoglu, Vedat, South Bank University
WAA2-6	Motion Analysis Using Steerable Filters for the
	Application to Low Quality Images
	Tavsanoglu, Vedat, South Bank University Buhmann, Sitta, Hochschule Bremen
WAA2-7	The SVD approach of steerable filter design
1113134-1	Sommer, Gerald and Herpers, Rainer, Christian-Albrechts-
	Universita et zu Kiel; Michaelis, Markus, Plettac Electronics
TT/A A 2	N. J. C. D'. L. J. C. A'. O
WAA3	Networks for Biological Computing &
	Fuzzy Logic - Lecture
	Professor Lex A. Akers
	University of Texas at San Antonio
WAA3-1	An Adaptive Front End for Olfaction
	Stanford, Theron, California Institute of Technology
	Apsel, Alyssa B., Johns Hopkins University Hasler, Paul, Georgia Institute of Technology
WAA3-2	Adaptation in an aVLSI Model of a Neuron
, , , , , , , , , , , , , , , , , , ,	Simoni, Mario F. and DeWeerth, Stephen P., Georgia Institute of
	Technology
WAA3-3	Biologically-Motivated Neural Learning in Situated
	Systems
	Scutt, Tom, University of Nottingham
TT/ 1 2 4	Damper, R.I., University of Southampton
WAA3-4	FWNN for Interval Estimation with Interval Learning
	Algorithm
WAA3-5	Jiao, LiCheng, Xidian University Fuggy Den Copposes or Core
WAAJ-J	Fuzzy-Dsp Coprocessor Core Sultan, Labib, Microfuzz Technologies Inc.
	,
WAA3-6	A Current-Mode Piecewise-Linear Function

WEDNESDAY – June 3, 1998 (Morning)

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WEDNESDAY – June 3, 1998 (Morning)	
	Approximation Circuit Based on Fuzzy-Logic Manaresi, Nicolo', D.E.I.S. University of Bologna; Baccarani, Giorgio, University of Bologna; Rovatti, Riccardo and Franchi, Eleonora, D.E.I.S. University of Bologna
WAA3-7	Embedded Fuzzy Control on Monolithic DC/DC Converter Criscione, Marcello, SGS-Thomson Microelectronics
WAA3-8	A Wavelet-Based Fuzzy Neural Network for Interpolation of Fuzzy If-Then Rules Jiao, LiCheng, Xidian University
WAA4	Image and Video Processing III - Lecture Professor Peter Pirsch
WAA4-1	University of Hannover, Germany Dr. James Brailean, Motorola Inc. A Comparative Study of DCT and Wavelet Based Coding Zhang, Ya-Qin, Sarnoff Corporation; Ramchandran, Kannan,
WAA4-2	University of Illinois; Xiong, Zixiang, University of Hawaii; Orchard, Michael, Princeton University A Two-Level MPEG-Compatible Video Coding Technique Using Wavelets Ahmad, I., Hong Kong University of Science and Technology
WAA4-3	Zhu, Wei-Ping, Univ. of Elec. Sci. Tech. Swamy, M.N.S. and Zan, Jinwen, Concordia U. An Adaptive Video Sub-sampling Technique for the Conversion Between High and Low Resolution Wong, Hon Wah and Au, Oscar, The Hong Kong University of
WAA4-4	Science and Technology Computation Reduction for Discrete Cosine Transform
WAA4-5	Pao, I-Ming and Sun, M.T., University of Washington Embedded Coding of Video Objects for Scalability Haridasan, Radhakrishnan and Baras, John S., Univ. of Maryland
WAA4-6	Hybrid DCT/Wavelet I-frame Coding for H.263+ Kim, Jongwon; Kuo, CC. Jay, and Song, Hwangjun, <i>University</i> of Southern California
WAA4-7	Hybrid search algorithm for block motion estimation Cheung, Chok-Kwan and Po, Lai-Man, City Univ. of Hong Kong
WAA4-8	Low-power MPEG-2 Encoder Architecture for Digital CMOS Camera Meng, Teresa H. and Hsieh, Jeff Y., Stanford University
WAA5	Wireless/Mobile Communications - Lecture
WAAS	Dr. Donald Gingras, SPAWAR Systems Center
WAA5-1	A priority-based random access spread spectrum protocol for integrated voice/data networks Lapic, Stephan and Gingras, Donald F., SPAWAR Systems Center
WAA5-2	A Chip-Interleaving DS SS System and Its Performance Under On-Off Wide-Band Jamming Gui, Xiang and Ng, Tung Sang, The University of Hong Kong
WAA5-3	A Genetic-Algorithm-Based Multiuser Detector for Multiple-Access Communications Lu, Wu-sheng; Wang, Xiao-Feng, and Antoniou, Andreas, University of Victoria
WAA5-4	A New Multiple Access Protocol for Multimedia Wireless Networks Gondim, Paulo L. and Salles, Ronaldo, <i>Instituto Militar de</i>
WAA5-5	Engenharia - IME Brazil A DS-CDMA Receiver Using Expotentially Weighted Despreading Waveforms

WAA5-7	DS-CDMA in unknown correlated noise Wang, Xiaodong and Poor, H.V., Princeton University Improvement in FCMA Perfromance with Limited
	Interleaving of Signatures
****	Ali, Mahmoud A., Menoufia University
WAA5-8	A Multiple-Access Interference Suppression
	Technique Employing Orthogonal Spreading Sequences and a Novel Decentralized Receiver for
	B-DS/CDMA Forward Link Systems in Multipath Channel
	Voltz, Peter J., and Shin, Sung-Hyuk, Polytechnic University
WAA6	Deep-Submicron Digital Circuit Issues – Lecture
	Professor Nicholas Rumin, McGill University
WAA6-1	Performance Criteria for Evaluation the Importance
	of On-Chip Inductance Neves, Jose L. <i>IBM Microelectronics</i> ; Friedman, Eby G. and
	Ismail, Yehea I., University of Rochester
WAA6-2	Interconnect Inductance Effects on Delay and
	Crosstalk for Long On-Chips Nets with Fast Input
	Slew Rates Lee, Mankoo; Hill, Anthony, and Darley, Merrick H., Texas
	Instruments Incorporated
WAA6-3	Linearized Sub-Optimum Method of Long Wire
	Interconnections with Uniformed Wire Driver
	Svensson, Christer; Mu, Fenghao and Alvandpour, Atila, Linkoping University
WAA6-4	An Incorrect Transient Coupling Induced Noise
	Suspectibility for Dynamic Circuits in Deep
	Submicron CMOS Technology
	Lee, Mankoo and Darley, Merrick H., Texas Instruments Incorporated
WAA7	Power Electronics - Lecture
	Professor Krishna Shenai
	University of Illinois at Chicago
WAA7-1	An adaptive stepwise quadratic state-space modeling
	technique for simulation of power electronics circuits
WAA7-2	Hui, S.Y. and Chung, Henry, City University of Hong Kong An Efficient Method for Calculating Power Flow

Solutions and the Closest Bifurcation Point using Mathematical Programming Mori, Hiroyuki and Iizuka, Fumitaka, Meiji University

Comutation of State Variable Sensitivities of PWM

Chung, Henry; Hui, S.Y., and Wong, Billy K., City University of Hong Kong
Single-Ended Compact MOS-FET Power Inverter

with Automatic Frequency Control for Maximizing RF Output Power In Megasonic Transducer at 3 MHz

Ikeda, hiroaki, Telecommunications Advancement Org. of Japan

DC/DC Regulators and its Applications

Shinohara, Shigenobu, Shizuoka University

WEDNESDAY – June 3, 1998 (Morning)

WAA5-6

Huang, Yuejin and Ng, Tung Sang, The University of Hong Kong

Blind joint equalization and multiuser detection for

WAA8 Amplifiers II - Lecture

WAA7-3

WAA7-4

	Inductor Payne, Alison and Thanachayanon, Apinunt, <i>Imperial College of</i>
WAA8-3	Science, Technology & Medicine A High Performance Low Voltage Op-Amp w/t
	Constant Rail-to-Rail Input-Gm Control & High Swing Self-Biasing Super Cascade Output Stage
VAA8-4	Asmanis, Georgios S., University of Southern California A Low-Voltage CMOS Rail-to-Rail Class-AB
VAA0-4	Input/Output OpAmp with Slew-Rate and Settling
	Enhancement
VAA8-5	Lin, Chi-Hung, The Ohio State University A 1.6V 80uW rail-to-rail constant-Gm bipolar
VAA0-3	adaptive biased op-amp input stage Cardarilli, G.C. and Ferri, Giuseppe, University of L'Aquila
VAA8-6	A high-drive high-gain CMOS current operational
712120	amplifier Pennisi, Salvo; Palumbo, G., and Palmisano, S., <i>Universita di Catania</i>
VAA8-7	High speed high accuracy voltage follower
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Su, Yih-Ming, National Cheng Kung University
*** * * * * * * * * * * * * * * * * * *	Lidgey, F.J., Oxford Brookes University
VAA8-8	Feedforward Compensation Techniques in the Design of Low Voltage Amplifiers
	Setty, Suma and Toumazou, Chris, Imperial College of Science
	Technology & Medicine
WAA9	Switched-Capacitor Techniques - Lecture
	Professor Marcus Helfenstein
VAA9-1	Switched-Capacitor Decimation Filter for 0.8 um
	CMOS
	Petraglia, Antonio, Federal University of Rio de Janeiro/COPPE-
	UFRJ; Franca, Jose E., Instituto Superior Tecnico; Mitra, Sanjit K., University of California – Santa Barbara; Baruqui, Fernando
	P., Federal University of Rio de Janeiro/COPPE
VAA9-2	A Switched-Capacitor N-Path Decimating Filter
VAA9-3	Franca, Jose E. and Neves, Rui F., Instituto Superior Tecnico
VAA9-3	CMOS Switched-Opamp Based Sample-and-Hold Circuit
	Harjani, Ramesh and Dai, Liang, University of Minnesota
VAA9-4	Companding Switched-Capacitor Filters
	Suyama, Ken; Krishnapura, Nagendra, and Tsividis, Yannis,
VAA9-5	Columbia University; Nagaraj, Krishnaswamy, Texas Instruments A New Look at Analogue Computing Using SW
71115-5	Circuits
	Sobhy, Mohamed I., University of Kent at Canterbury, UK
VAA9-6	Clocking scheme for SC circuits
X/A A O 7	Steensgaard, Jesper, Technical Univ of Denmark
VAA9-7	Optimization of the Switched-Capacitor Integrator Settling Time
	Chilakapati, Uma and Fiez, Terri S., Washington State University
VAA9-8	Recursive Switched-Capacitor Hilbert Transformer
	Baruqui, Fernando P., Federal University of Rio de
	Janeiro/COPPE; Mitra, Sanjit K., University of California - Santa Barbara; Petraglia, Antonio, Federal University of Rio de
	Janeiro/COPPE-UFRJ
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A 1.2 V CMOS op amp with high driving capacity
Costa, Alfredo and Ferri, Giuseppe, University of L'Aquila

A 3-V RF CMOS Bandpass Amplifier Using An Active Inductor

Professor Willy Sansen Katholic University of Leuven

WAA8-1

WAA8-2

(Morning)

WAA10	Communicating with Chaos III - Special
	Professor Michael Peter Kennedy
	University College Dublin
WAA10-1	Multiplex Communication Schemes Based on
	Sychronization via Multiplex Pulse-Trains
	Saito, T., Hosei University; Schwarz, W., Technical University of Dresden; Torikai, H., Hosei University
WAA10-2	Synchronizing Autonomous Chaotic Circuits Using
	Bandpass Filtered Signals
	Pecora, L.; Mar, D.J.; Carroll, T.L.; Johnson, G.A.,
WAA10.2	and Carroll, T.L., Naval Research Lab
WAA10-3	Master Stability Functions for Synchronized Chaos in Arrays of Oscillators
	Carroll, T.L. and Pecora, L., Naval Research Lab
WAA10-4	Exploiting the Concept of Conditional Transversal
	Lyapunov Exponents for Study of Synchronization of
	Chaotic Circuits
WAA10-5	Galias, Z., AGH Nonlinear H-Infinity Synchronization: Case Study for
WAAIU-3	a Hyperchaotic System
	Suykens, J. and Vandewalle, J., KU Leuven; Chua, L.O, U.C.
TT/ 1 1 1 0 6	Berkeley
WAA10-6	Estimation via Synchronization: FM Demodulation
	Example Hahs, D. and Corron, N.J., Dynetics
WAA10-7	Chaotic Synchronization in Coupled Phase Systems
	Shalfeev, Vladimir, Nizhny Novgorod
WAA10-8	Regular and Chaotic Phase Synchronization of
	Coupled and Discrete Phase-Locked Loops Osipov, G., and Kurths, J., Nizhny Novgorod
	Osipov, O., and Rainis, s., many novgorou
W A A 11	VI SI I arout and Timing I sature
WAA11	VLSI Layout and Timing - Lecture
WAA11	Professor Majid Sarrafzadeh
	Professor Majid Sarrafzadeh Northwestern University
WAA11-1	Professor Majid Sarrafzadeh
	Professor Majid Sarrafzadeh Northwestern University On Orientation Metric and Euclidean Steiner Tree Constructions Leung, B., U. of Waterloo; Wong, C. K., Chinese University of
WAA11-1	Professor Majid Sarrafzadeh Northwestern University On Orientation Metric and Euclidean Steiner Tree Constructions Leung, B., U. of Waterloo; Wong, C. K., Chinese University of Hong Kong; Li, S., Sarnoff Corporation
	Professor Majid Sarrafzadeh Northwestern University On Orientation Metric and Euclidean Steiner Tree Constructions Leung, B., U. of Waterloo; Wong, C. K., Chinese University of Hong Kong; Li, S., Sarnoff Corporation Computational Complexity Analysis of Set-Bin-
WAA11-1	Professor Majid Sarrafzadeh Northwestern University On Orientation Metric and Euclidean Steiner Tree Constructions Leung, B., U. of Waterloo; Wong, C. K., Chinese University of Hong Kong; Li, S., Sarnoff Corporation Computational Complexity Analysis of Set-Bin- Packing Problem
WAA11-1 WAA11-2	Professor Majid Sarrafzadeh Northwestern University On Orientation Metric and Euclidean Steiner Tree Constructions Leung, B., U. of Waterloo; Wong, C. K., Chinese University of Hong Kong; Li, S., Sarnoff Corporation Computational Complexity Analysis of Set-Bin- Packing Problem Yokomaru, Toshihiko; Izumi, Tomonori; Kajitani, Yoji, and Takahashi, Atsushi, Tokyo Institute of Technology
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WAA11-1 WAA11-2	Professor Majid Sarrafzadeh Northwestern University On Orientation Metric and Euclidean Steiner Tree Constructions Leung, B., U. of Waterloo; Wong, C. K., Chinese University of Hong Kong; Li, S., Sarnoff Corporation Computational Complexity Analysis of Set-Bin- Packing Problem Yokomaru, Toshihiko; Izumi, Tomonori; Kajitani, Yoji, and Takahashi, Atsushi, Tokyo Institute of Technology A New Approach to Over-the-Cell Channel Routing
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WAA11-1 WAA11-2 WAA11-3	Professor Majid Sarrafzadeh Northwestern University On Orientation Metric and Euclidean Steiner Tree Constructions Leung, B., U. of Waterloo; Wong, C. K., Chinese University of Hong Kong; Li, S., Sarnoff Corporation Computational Complexity Analysis of Set-Bin- Packing Problem Yokomaru, Toshihiko; Izumi, Tomonori; Kajitani, Yoji, and Takahashi, Atsushi, Tokyo Institute of Technology A New Approach to Over-the-Cell Channel Routing Wong, C. K., Chinese University of Hong Kong; Wen, Shui-An and Wang, Ting-Chi, Chung Yuan Christian University; Wong, Martin, University of Texas at Austin A heuristic algorythem to solve constrained via minimazation for three-layer routing problems
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Sha, Edwin, *University of Notre Dame*; Passos, Nelson L., *Midwestern State University*; Chantraporncha, Chantana and Tongsima, Sissades, *University of Notre Dame*

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	Internet - Special
	Dr. Chun-Sheng Li
	IBM T. J. Watson Research Center
WAA12-1	System Resource Management for Network Servers Kandlur, Dilip, IBM T.J. Watson Research Center
WAA12-2	Wireless Systems and Portable Multimedia
	Lin, Horng-dar, NeoPAradigm Labs, Inc.
WAA12-3	Local Loop Access Technology
	Cioffi, John, Stanford University
WAA12-4	Issues for Image/Video Digital Libraries
	Manjunath, B.S., U.C. Santa Barbara
WAA12-5	Transcoding Internet Content for Heterogenous Client
	Devices
	Mohan, Rakesh, IBM T.J. Watson Research Center
	Li, S., Sarnoff Corporation
	Smith, John, IBM T.J. Watson Research Center
WAA12-6	Real-Time Distributed and Parallel Processing for
	MPEG-4
	He, Y.; Liou, M.L., and Ahmad, I., Hong Kong University of
	Science and Technology
WAA12-7	Standards for Multimedia Communications Over the
	Internet
	Chen, Tsuhan, Carnegie Mellon University
WAA12-8	A Virtual Classroom for Real-Time Interactive
	Distance Learning
	Chen F. Tayas Instruments: Choi K. H. Hwang, I.N.

WAA13 Digital Filter Design and Implementation – Poster

Deshpande, S.; Youn, J., and Sun, M.T., University of Washington

Fast Browsing of Speech/Audio Material for Digital

Au, Oscar, Hong Kong University of Science and Technology

Professor Y. C. Lim

WAA12-9

National University of Singapore

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WAA13-1 Efficient parallel FIR filter implementations using

frequency spectrum characteristics Parhi, Keshab K., *University of Minnesota*

Chung, Jin-Gyun, Chonbuk National University
WAA13-2 Signed Power-Of-Two(SPT) Term Allocation Scheme

For The Design Of Digital Filters

Lim, Yong-Ching, National University of Singapore Li, S., Sarnoff Corporation

Yang, Rui, National University of Singapore

WAA13-3 Peak-Constrained Design of Nonrecursive Digital Filters with Low Passband/Stopband Engergy Ratio

Netto, Sergio L., Programa de Engenharia Eletrica Diniz, Paulo S., Federal University of Rio de Janeiro

WAA13-4 An Iterative Reweighted Least Squares Algorithm for Constrained Design of Nonlinear Phase FIR Filters
Lang, Mathias, Vienna University of Technology

WAA13-5 Design of linear phase FIR filters using the nonuniform DCT

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	Okuda, Masahiro, Keio University
WAA13-6	Optimal fixed-point VLSI structure of a floating-point
	based digital filter design Wu, An-Yeu, National Central University
WAA13-7	Improved Tuning Accuracy Design of Parallel-Allpass-
	Structures-Based Variable Digital Filters
	Kawamata, Masayuki and Stoyanov, Georgi, Tohoku University
WAA13-8	Computationally Fast Lattice Bilinear Digital Ladder
	Filters with Comparison to Circulator WDFs Sollander, Magnus and Harnefors, Lennart, Malardalen
	University; Signell, Svante, Ericsson Radio Systems
	Holmberg, Johnny, Malardalen University
WAA13-9	Design of General-Order Bode-Type Variable-
	Amplitude Digital Equalizers
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WAA13-10	A Novel Modified Branch-and-Bound Technique for Discrete Optimization over Canonical Signed-Digit
	Number Space
	Nowrouzian, Behrouz, University of Alberta
	Ashrafzadeh, Farhad, and Fuller, Arthur, University of Alberta
WAA13-11	Analytical Guess of Error for Nonlinear FIR Filters to
	Approximate Linear Phase Response Nishihara, Akinori; Fujii, Nobuo, and Yagyu, Mitsuhiko, <i>Tokyo</i>
	Institute of Technology
WAA13-12	A systematic technique for designing approximately
	linear phase recursive digital filters
	Saramaki, Tapio A. and Surma-aho, Kimmo, Tampere University
WAA13-13	of Technology
WAA13-13	Design of very low-sensitivity and low-noise recursive digital filters using a cascade of low-order wave lattice
	filters
	Yli-Kaakinen, Juha; Saramaki, Tapio A., and Surma-aho, Kimmo,
	Tampere University of Technology
WAA13-14	Analytucal Design of almost Equiripple FIR Half-
	Band Filters Zahradnik, Pavel, Czech Technical University
WAA13-15	Design and VLSI Implementation of Multirate Filter
	Banks Based on Approximately Linear Phase Allpass
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	Lu, C., and Summerfield, Stephen, University of Warwick
WAA13-16	A Highly-Flexible FIR Processor with Scaleable
	Dynamic Data Ranges Liu, Wei-Lung and Chen, Oscal TC., National Chung Cheng
	University.
WAA13-17	A computationally efficient design of two-band QMF
	banks based on the frequency sampling approach
	Gandhi, Rajeev and Mitra, Sanjit K., University of California – Santa Barbara
WAA13-18	Low Power Implementation of Linear Phase FIR
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Filters for Single Multiplier CMOS Based DSPs
	Erdogan, Ahmet T. and Arslan, Tughrul, Cardiff University of
TT 1 1 1 2 1 0	Wales
WAA13-19	Automated Design of Low Complexity FIR Filters Bull, David R. and Redmill, David, University od Bristol
WAA13-20	Architecture of a programmable FIR filter co-
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	Gay-Bellile, Olivier and Dujardin, Eric, Laboratoires
****	d'Electroniques Philips
WAA13-21	Variable 1-D Digital Filter Designs Using Vector
	Array Decomposition Deng, Tian-Bo, Toho University
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WAA13-22	Digital Hilbert Transformer Composed of Identical
	Allpass Subfilters

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WAA13-24	Constrained Genetic Algorithm Design Of Finite Presision FIR Linear Phase Raised Consine Filters Somerset, W.P.; Moniri, M., and Al-Hashimi, Bashir, Staffordshire University
WAA14	VLSI Architectures, Algorithms and CAD – Poster
	Professor Ken Suyama, Columbia University
WAA14-1	Accuracy Analysis of Layout Parasitric Extraction Based on Boolean Methods Brambilla, Angelo, Dipartimento di Elettronics e Informazione
WAA14-2	Hardware efficient transform designs with cyclic formulation and subexpression sharing Jen, Chein-Wei, National Chiao Tung University
WAA14-3	A Field Programmable Gate Array Chip with Hierarchical Inderconnection Structure Lai, Yen-Tai, National Cheng Kung University
WAA14-4	Low-Energy Programmable Finite Field Datapath Architectures Parhi, Keshab K. and Song, Leilei, University of Minnesota
WAA14-5	The LEMMA Developer's Toolbox: Semi-Automated Test Development for Analog and Mixed-Signal Circuits
	Kennedy, Michael P., University College Dublin; Wrixon, Adrian, University of California at Berkeley; O'Donnell, John; Grogan, Paul, and O'Dwyer, Tom, Analog Devices
WAA14-6	An High Speed VLSI Architecture for Scaled Residue to Binary Conversion Lojacono, Roberto; Re, Marco, and Cardarilli, Gian Carlo, Univ. of Rome "Tor Vergata"
WAA14-7	VLSI Implementation of Phong Shader in3D Graphics Sin, Hyun Chul; Lee, Jin Aeon, and Kim, Leesup, Korea Advanced Institute of Science and Technology
WAA14-8	State Encoding for Low Power Embedded Controllers Sciuto, Donatella, <i>Politecnico di Milano</i> Silvano, Cristina and Daldoss, Lidia, <i>Università di Brescia</i>
WAA14-9	Design of the Scan Line Image Processor Chip Sunwoo, Myung H., Ajou University
WAA14-10	An Efficient Programmable 2-D Convolver Chip Eun, Seyoung and Sunwoo, Myung H., Ajou University
WAA14-11	Synthesis of Folded Multi-Dimensional DSP Systems Sundararajan, Vijay, University of Minnesota, Twin Cities Campus; Parhi, Keshab K, University of Minnesota
WAA14-12	Low Power Scheduling with Resources Operating at Multiple Voltages
WAA14-13	Chakrabarti, Chaitali and Shiue, Wen-Tsong, Arizona State Univ. A CPLD Design of a Self-Organizing System for Data Clustering
WAA14-14	Miyanaga, Yoshikazu; Ohkubo, Jun'ya, and Tochinai, Koji, Hokkaido University High Performance Cell for Solving Field Problems
	Using Resistive Grid Methodestive Carneiro, Noel F. Carlos, University of, New Mexico State Ramirez-Angulo, Jaime, University of, New Mexico State
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	Freking, Robert A. and Parhi, Keshab K., University of Minnesota
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	fast clustering of radar pulses
	Savaria, Yvon, Ecole Polytechnique de Montreal
	Blaquiere, Yves, Universite du Quebec a Montreal
	Granger, Eric, Ecole Polytechnique de Montreal
	Lavoie, Pierre, Defense Research Establishment Ottawa
	Cantin, Marc-Andre, Universite du Quebec a Montreal
WAA14-18	Neural Core Module for Embedded Intelligence
	Diepenhorst, Marco; TerHaseborg, Henrickus; Nijhuis, Jos, and
	Spaanenburg, Ben, University of Groningen
WAA14-19	A do-it-yourself methodolgy for CMOS transistor
	mismatch characterization
	Linares-Barranco, Bernabe and Serrano, Teresa, National
	Microelectronics Center
WAA14-20	Self-Calibrating Clock Distribution with Scheduled
	Skews
	Liu, Wentai, North Carolina State University
WAA14-21	Array Architecture and Design for Image Window
WAA14-21	Operation Processing ASICs
	Kunieda, Nobuyuki, <i>Saitama University</i> ; Isshiki, Tsuyoshi, <i>Tokyo</i>
	Institute of Technology; Jiang, Hsin-Chin, Institute of Electronics,
	National Chiao-Tung Univ.; Li, Dongju, Tokyo Institute of Tech.
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	Euclid's Algorithm for Division in GF(2)
	Wang, Chin-Liang and Guo, Jyh-Huei, National Tsing Hua
****	University
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	Wei, Shyue-win, Chung-Hua University
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	High Throughput Variable Length Decoder
	Shieh, Bai-Jue; Lee, Yew-San; and Lee, Chen-Yi, National Chiao
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	Univeristy of Illinois, Urbana-Champaign
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	Benabes, Philippe; Aldebert, Patrick, and Kielbasa, Richard,
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	Gain-Bandwidth and Comparison with CMOS
	Technology
	Loumeau, P.; Rachid, Bouchakour, and Recoules, H., <i>Telecom</i>
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	dimensional Fourier Transformation
	Yamagami, Yoshihiro; Ushida, Akio, and Nishio, Yoshifumi,
	Tokushima University
WAA15-4	Joint Optimization of Multiple Behavioral and
	Implementation Properties of Analog Filter Designs
	Evans, Brian L., The University of Texas at Austin
	Tosic, Dejan V. and Lutovac, Miroslav D., University of Belgrade
	Damera-Venkat, Niranjan, The University of Texas at Austin
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New Description Language and Graphical User Interface for Module Generation in Analog Layouts Schulze, Jens, Robert Bosch GmbH; Kleine, Ulrich and Wolf,

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	in Video Frequency CMOS sinc(x) Equalizers Al-Hashimi, Bashir; Dudek, Frank, and Moniri, Mansour,
	Staffordshire University
WAA15-7	Adjoint network of periodically switched linear
	circuits
	Yuan, Fei and Opal, Ajoy, University of Waterloo
WAA15-8	Layout Driven Macromodel of an Operational
	Amplifier
	Franca, Jose E. and, Chung-Yuk, Or, The Chinese University of Hong Kong
WAA15-9	On the Algebraic Reuse of Hardware Design
************	de Melo, Ana Cristina V., University of Sao Paulo
WAA15-10	Assessing the uniquness of the dc solutions by tearing
	of cactus graphs via detection of hinging structures
	Sarmiento-reyes, A., Instituto Nacional de Astrofisica
WAA15-11	On the High Lever Canonical Representation of
	Piecewise Linear Functions
	Desages, Alfredo; Agamenno, Osvaldo, and Julian, Pedro, Universidad Nacional del Sur
WAA15-12	Hierarchical symbolic analysis of large analog circuit
***************************************	with determinant decision diagrams
	Shi, C.J. Richard and Tan, Xiangdong, University of Iowa
WAA15-13	Reducing Operation Complexity in Symbolic
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	Camurati, Paolo; Cabodi, Gianpiero, and Quer, Stefano,
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	Chang, Molin and Feng, Wu-Shiung, National Taiwan University
	Chen, Pei-Yin, National Cheng Kung Univ.
	Wang, Michelle, University of Southern California
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	state Circut Simulation
	Bolcato, P.; Larcheveque, R., and Ngoya, E., <i>University de Limoges</i>
WAA15-16	Generalized Centers of Gravity Algorithm for Yield
***************************************	Optimization of Integrated Circuits
	Keramat, Mansour and Kielbasa, Richard, Ecole Superieure
	d'Electricite (SUPELEC)
WAA15-17	Statistical Design of Integrated Circuits Using
	Maximum Likelihood Estimation of the Covariance
	Matrix Seifi, Abbas, <i>University of Waterloo</i>
WAA15-18	Modeling the Dynamic Behavior of Series-Connected
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	CMOS Gates
	Bisdounis, Labros and Koufopavlou, Odysseas, VLSI Design
	Laboratory
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	Frequency-Dependent Lossy Transmission Lines
	Ushida, Akio; Tanji, Yuichi, and Nishio, Yoshifumi, Tokushima University
WAA15-20	Two-Pole Approximation for High Speed Interconnect
	Design
	Chen, Richard and Shao, Jianhua, City University of Hong Kong
WAA15-21	Analysis of Interconnected Lumped Distributed Multi-
	Branch Multi-Stage Networks
	Sakagami, Iwata, Muroran Institute of Technology
WAA15-22	Precorrected-DCT Techniques for Modeling and
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	Silveira, Luis and Costa, Joao P., Instituto Superior
	Tecnico/INESC; Chou, Mike, Massachusetts Institute of Tech.

(Morning)

WEDNESDAY – June 3, 1998 (Morning)

WAA15-23 Analysis of the Transistor Chain Operation in CMOS Gates for Short Channel Devices

Chatzigeorgiou, Alexander N. and Nikolaidis, Spyridon, Aristotle University of Thessaloniki

WAA15-24 Delay and Power Estimation for a CMOS Inverter

Driving RC Interconnect Loads

Kyriakis-Bitzar, Eystathios, NCSR "Demokritos" Nikolaidis, Spyridon and Chatzigeorgiou, Alexander N., Aristotle University of Thessaloniki

WEDNESDAY – June 3, 1998 (Late Morning)

WAB6 **DSP Architectures -Lecture** Professor Herschel H. Loomis, Jr. Naval Postgraduate School **WAB6-1** General Data-Path Organization of a MAC unit for **VLSI Implementation of DSP Processors** Farooqui, Āamir A. and Oklobdzija, Vojin G., UC-Davis **WAB6-2** Nonlinear DSP Coprocessor Cells-One and Two Cycle Chips Jain, Vijay K., University of South Florida Lin, Kuang, Thomson Multimedia GAA: A VLSI Genetic Algorithm Accelerator with **WAB6-3 On-the-Fly Adaptation of Crossover Operators** Hatta, Koichi; Wakabayashi, Shin'ichi; Nakayama, Yoshikatsu; Koide, Tetsushi; Toshine, Naoyoshi, and Goto, Mutsuaki, Hiroshima University

VLSI Implementation of a DWT Architecture

Dig. Tech. for Improving Delta-Sigma

Chen, Po-Yueh, University of Maryland Acharya, Tinku, INTEL Corporation

WAB6-4

WAB7

ADCs - Special Professor Gabor C. Temes, Oregon State University **WAB7-1** An Improved Individual Level Averaging Approach Towards Multi-Bit Sigma-Delta Modulator Leung, B., U. of Waterloo; Chen, F., Texas Instruments **WAB7-2** A Reduced-Complexity Mismatch-Shaping DAC for **Delta-Sigma Data Converters** Jensen, H.T.; Fogleman, E., and Galton, Ian, UC San Diego **WAB7-3** Linear Digital Calibration of Pipelined Nyquist-Rate and Multi-Bit Oversampled A/D Converters Cauwenberghs, Gert, John Hopkins University **WAB7-4 Adaptive Compensation of Analog Circuit** Imperfections for Cascaded Delta-Sigma ADCs

Sun, Tao and Temes, Gabor C., Oregon State University

WEDNESDAY – June 3, 1998 (Afternoon)

WPA1	Wavelets: Implementation and Application
	- Lecture
	Professor Truong Nguyen, Boston University
WPA1-1	Nonstationary Signal Classification Using Pseudo
	Power Signatures
	Aravena, Jorge L. and Venkatachalam, Vidya, Louisiana State
	University
WPA1-2	A Simple Scheme of Decomposition and
	Reconstruction of Continuous-time Signals by
	B-splines Ichige, Koichi, <i>University of Tsukuba</i> ; Ishii, Rokuya, <i>Yokohama</i>
	National University; Kamada, Masaru, Ibaraki University
WPA1-3	A VLSI Architecture Design with Lower Hardware
	Cost and Less Memory for Separable 2-D Discrete
	Transform
	Liu, Zemin, Beijing University of Posts and Telecommunications
	Shieh, Ming-Der and Shue, Ming-Hwa, National Yunlin Univ. of
TT/D 4 4 4	Science & Tech.
WPA1-4	Synthesis filter bank with low memory requirrments
	for image subband coding Sundsbo, Ingil and Ramstad, Tor A., Norwegian University of
	Science and Technology
WPA1-5	Optimal Design of Interpolating Wavelet Transform
	Jiao, LiCheng; Bao, Zheng, and Shui, PengLang, XiDian
	University
WPA1-6	Semi-recursive VLSI architecture for Two
	Dimensional Discrete Wavelet Transform
	Kim, Leesup; Paek, Seungkwon, and Jeon, Hyunkyu, Korea Advanced Institute of Science and Technology
WPA1-7	Implementation of 2-Dimensional Wavelet Filters
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	using Parallel Processing Systems based on the TESH
	Interconnection Network
	Maziarz, Bogdan and Jain, Vijay K., University of South Florida
WPA1-8	Polyphase Adaptive Filter Banks for Subband
	Decomposition
	Gerek, Omer N. and Cetin, Enis, Bilkent University
WPA2	3D Data Modeling and Imaging - Special
7 4 I 1 I I	Professor Guido Cortelazzo, <i>University of Padova</i>
WPA2-1	Hybrid Modeling for Manufacturing with NURBS and
VV F A 2-1	3D Scanner Data
	Besl, Paul, Alias-Wavefront, Inc.

WPA2-2	Portable Digital 3D Imagining System for Remote
	Sites
	Bernier, F.; Cournoyer, L.; Blais, F.; Harrison, N., and Beraldin,
	John A., Institute for Information Technology
WPA2-3	Simple 3D Photography
	Perona, Pietro and Bouguet, Jean-Yves, California Institute of
	Technology
WPA2-4	Photorealistic Texture Mapping on 3D Surfaces
	Kunt, Murat; Ebrahimi, Touradj, and Jordan, Frederic, Swiss
	Federal Institute of Technology
WPA2-5	Systems for Disparity-Based Multiple-View
	Interpolation
	Ohm, Jens-Rainer; Izquierdo, Ebroul, and Mueller, Karsten,
	Heinrich-Hertz-Institut
WPA2-6	2-D Patterns for 3-D Surface Matching

WPA2-8 WPA2-9	Bringing Image-Based Rendering into Mainstream Graphics Yu, Yizhou; Debevec, Paul; Borshukov, George, and Malik, Jitendra, U.C. Berkeley	
	Frequency Domain Methods for 3D Imaging Cortelazzo, Guido, Doretto, Gianfranco, Totaro, Stefano, University of Padova	
WPA3	Cellular Neural Networks - Lecture Professor Jacek M. Zurada, <i>University of Louisville</i>	
WPA3-1	A Modular gmC Programmable CNN Implementation Lim, Drahoslav and Moschytz, George S., Swiss Federal Institute of Technology	
WPA3-2	An improved architecturefor the interconnections in a multi-chip CNN system Bonaiuto, Vincenzo; Sargeni, Fausto, and Salerno, Mario, University of Rome "Tor Vergata"	
WPA3-3	VLSI Delta-Sigma Cellular Neural Network for Analog Random Vector Generation Cauwenberghs, Gert, Johns Hopkins University	
WPA3-4	On Evolvable Hardware: On-Line Evolution by Cellular Programming Nicoletti, Guy, University of Pittsburgh at Greensburg	
WPA3-5	An Analysis of CNN Settling Time Moschytz, George S. and Haenggi, Martin, Swiss Federal Institute of Technology	
WPA3-6	Learning Algorithms for Cellular Neural Networks Mirzai, Bahram and Moschytz, George S., Swiss Federal Institute of Technology	
WPA3-7	Autowaves for motion control: a CNN approach Arena, Paolo; Branciforte, Marco; DiGrazia, Pietro; Branciforte, Marco; Di Grazia, Pietro, and Fortuna, Luigi, <i>Univ. of Catania</i>	
WPA3-8	A Time-Multiplexing Simulator for Cellular Neural Network (CNN) Using Simulink Sobhy, Mohamed I. and El-Shafel, Ahmed A., University of Kent at Cantebury, UK	
WPA4	High-Level Synthesis - Lecture	
	Professor Forrest D. Brewer	
WPA4-1	University of California at Santa Barabara Parallel Algorithms for Simultaneous Scheduling, Binding and Floorplanning in High-level Synthesis Banerjee, Prithviraj, Northwestern University Prabhakaran, Pradeep, University of Illinois, Urbana-Champaign	
WPA4-2	A simple Alternative for Storage Allocation in High- level Synthesis Aloqeely, Mohammed A, King Saud University	
WPA4-3	A New Partitioning Framework for Uniform Clock Distribution During High Level Synthesis Maaz, Mohamad B. and Bayoumi, Magdy, U. of Southwestern Louisiana	
WPA4-4	A Binding Algorithm for retargetable Compilation to Non-Orthogonal Datapath Architechtures Kambe, Takashi, SHARP Corporation; Ishiura, Nagisa, Osaka University; Yamaguchi, Masayuki, SHARP Corporation	

WPA2-7

Johnson, Andrew E., Jet Propulsion Laboratory

Object-Based Coding of Stereoscopic and 3D Image

Sequences
Strintzis, Michael G. and Malassiotis, Sotiris, University of Thessaloniki

(Afternoon)

WPA5 Archs., Algors. & Impl. for Wireless Comm. **Systems - Special** Professor H. V. Poor, Princeton University WPA5-1 Creating and Exploiting Diversity in Wireless Systems through Signal Processing Wornell, Gregory, MIT **WPA5-2** A Practical Implementation of an Adaptive Wideband **Crosspolar Signal Combiner** Bohannon, John; Harp, Jeff, and Treichler, John, Applied Signal Technology **WPA5-3 Signal Processing Algorithms for Adaptive Interference Suppression** Poor, H.V., Princeton University WPA5-4 Low Power Design of a Wideband Spread Spectrum **Radio Using Multiuser Detection** Broderson, Robert, UC Berkeley WPA5-5 **Low-Power Signal Processing for Portable Electronics** Meng, Teresa, Stanford University **WPA5-6** Design of Low Power Signal Processing Modules for Wireless Applications Chandrakasan, Anantha, MIT A 1V Programmable DSP for Wireless Applications **WPA5-7** Lee, Wai, Texas Instruments, Inc. **WPA5-8 Low-Power Radio Frequency Circuit Architechtures** for Portable Wireless Communications Larson, Larry, UC San Diego

Topics in Analog & Digital Test - Lecture Professor Ramesh Harjani, University of Minnesota Low Expense Architectures for a Dynamic Spectrum

Fischer, Wolf-Joachim; Kranz, Ernst-Georg, and Marschner,

Hajjar, Ara and Roberts, Gordon, MACS Laboratory, McGill

A Multi-Pass A/D Conversion Technique For **Extracting On-Chip Analog Signals**

Analyzer Based on SC-Filters

University

Uwe, Dresden University of Technology

WPA6

WPA6-1

WPA6-2

WDA6-3

WEDNESDAY – June 3, 1998

(Afternoon)

WPA6-3	Arbitrary Band-Limited Pulse Generation for Built-In
	Self-Test Applications
	Dufort, Benoit and Roberts, Gordon, MACS Laboratory, McGill
	University
WPA6-4	The Effective BIST Scheme for Delay Testing
	Li, Xiaowei and Cheung, Paul Y.S., University of Hong Kong
WPA6-5	Design of Single-Ended SRAM with High Test
	Coverage and Short Test Time
	Wang, Chua-Chin and Wu, Chi-Feng, National Sun Yat-Sen Univ
WPA6-6	Reducing Power Consumption During Test
	Application by Test Vector Ordering
	Girard, Patrick, L.I.R.M.M. / C.N.R.S.
WPA6-7	A Simplicial Method for the Simulation of Transistor
	Shorts in CMOS Logic Gates
	Milor, Linda and Lin, Hung-Jen, University of Maryland
WPA6-8	Artificial Neural Network Based Multiple Fault
	Diagnosis in Digital Circuits
	Al-Jumah, Abdullah and Arslan, Tughrul, Cardiff University of
	Wales

	Professor Guanrong Chen, University of Houston
WPA7-1	Predicting Period-Doubling Bifurcations in Nonlinear
	Time-Delayed Feedback Systems
	Chen, Guanrong, University of Houston
	Berns, Daniel, Universidad Nacional de la Patagonia
WPA7-2	Moiola, Jorge L., Universidad Nacional del Sur
WPA/-2	Rotating Stall Control via Bifurcation Stabilization Zhou, Kemin and Martin, Phillip, Louisiana State University
	Chen, F., Texas Instruments
	Gu, Guoxiang, Louisiana State University
WPA7-3	Towards a Bifurcation Theory for Control Systems:
	Spectral Aspects
	Colonius, Fritz, Universitat Ausberg
TYP 4 # 4	Kliemann, Wolfgang, Iowa State University
WPA7-4	Bifurcation Analysis and Control of Nonlinear Systems
	with a Nonsemisimple Zero Fu, Jyun-Horng, Wright State University
WPA7-5	Stabilization of a class of Bifurcation via State
VVI 117-3	Feedback
	Fitch, Osa and Kang, Wei, Naval Postgraduate School
WPA7-6	Dynamic Bifurcation Control of Cardiac Dynamics
	Wang, Hua O., Duke University
WPA7-7	Feedback Control of Hopf Bifurcations
	Chen, Guanrong, University of Houston
WPA7-8	Controlling Intermittency in Reaction Diffusion
	Systems Battogtokh, Dorjsuren, Kyoto University
	Battogtokii, Boljstieli, Kyoto Oniversity
WPA8	Current Mode Techniques - Lecture
	Dr. Arash Loloee, Texas Instruments
WPA8-1	Dr. Arash Loloee, <i>Texas Instruments</i> A 50 MHz 5th Order Elliptic LP-filter Using Current
WPA8-1	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology
WPA8-1	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., <i>Helsinki</i>
	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology
WPA8-1	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-
	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology
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WPA8-2	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone,
WPA8-2 WPA8-3	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM)
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WPA8-2 WPA8-3 WPA8-4	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sienecio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB
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WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology
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WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell
WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories
WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories Toumazou, Chris and Leelavattananon, Kritsapon, Imperial
WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling Jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories Toumazou, Chris and Leelavattananon, Kritsapon, Imperial College of Science Techology & Medicine
WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories Toumazou, Chris and Leelavattananon, Kritsapon, Imperial College of Science Techology & Medicine An Improved CMOS Offset-compensated Current
WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories Toumazou, Chris and Leelavattananon, Kritsapon, Imperial College of Science Techology & Medicine An Improved CMOS Offset-compensated Current Comparator for High Speed Applications Worapishet, Apisak, Imperial College of Science Technology &
WPA8-2 WPA8-3 WPA8-4 WPA8-5	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories Toumazou, Chris and Leelavattananon, Kritsapon, Imperial College of Science Technology & Medicine An Improved CMOS Offset-compensated Current Comparator for High Speed Applications Worapishet, Apisak, Imperial College of Science Technology & Medicine; Hughes, John B, Philips Research Laboratories
WPA8-2 WPA8-3 WPA8-4 WPA8-5 WPA8-6	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories Toumazou, Chris and Leelavattananon, Kritsapon, Imperial College of Science Techology & Medicine An Improved CMOS Offset-compensated Current Comparator for High Speed Applications Worapishet, Apisak, Imperial College of Science Technology & Medicine; Hughes, John B, Philips Research Laboratories Toumazou, Chris, Imperial College of Science Tech. & Medicine
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WPA8-2 WPA8-3 WPA8-4 WPA8-5 WPA8-6	A 50 MHz 5th Order Elliptic LP-filter Using Current Mode Gm-C Topology Koli, Kimmo J.; Kosunen, Marko, and Halonen, Kari A., Helsinki University of Technology A Low Mismatch Sensitivity Fully-Balanced Current-Mode Integrator Sanchez-Sinencio, Edgar, Texas A&M University A CMOS Current-Mode Multiplier/Divider Circuit Sanchez-Solano, Santiago; Huertas, Jose L., and Baturone, Iluminada, Centro Nacional de Microelectronica (CNM) Sampling jitter in high-speed SI circuits Jonsson, Bengt E., Ericsson Radio Systems AB The Multiple-Input Translinear Element: A Versatile Circuit Element Diorio, Chris, University of Washington Minch, Bradley A., Cornell University; Hasler, Paul E., Georgia Institute of Technology Very Low Charge Injection Switched-Current Memory Cell Hughes, John B, Philips Research Laboratories Toumazou, Chris and Leelavattananon, Kritsapon, Imperial College of Science Techology & Medicine An Improved CMOS Offset-compensated Current Comparator for High Speed Applications Worapishet, Apisak, Imperial College of Science Technology & Medicine; Hughes, John B, Philips Research Laboratories Toumazou, Chris, Imperial College of Science Tech. & Medicine

WE	DNESDAY – June 3, 1998 (Afternoon)
<u> </u>	Dr. Jose Silva-Martinez, National Institute for
WPA9-1	Astrophysics, Optics, and Eng. Class AB output stages of the integrated amplifiers Ivanov, Vadim, Burr-Brown Corp.
WPA9-2	A Current Driven, Programmable Gain Differential Pair Using MOS Translinear Circuits Turchetti, C.; Conti, M.; Guaitini, Giovanni, and Orcioni, Simone, University of Ancona
WPA9-3	New high-precision circuits for on-chip capacitor ratio testing and sensor readout
WPA9-4	Temes, Gabor C. and Wang, Bo, Oregon State University Very Wide Range Tunable CMOS/bipolar Current Mirror Serrano, Teresa and Linares-Barranco, Bernabe, National
WPA9-5	Microelectronics Center Matching Performance of Current Mirrors with Arbitrary Parameter Gradients Through the Active Devices
WPA9-6	Geiger, Randall, <i>Iowa State University</i> An Active Tuning and Impedance Matching Element Rahkonen, Timo E. and Lapinoja, Mikko, <i>University of Oulu</i>
WPA9-7	Voltage Controlled Resistor for Mismatch Adjustment in Analog CMOS Circuits Scott, Tom; Gupta, Sandhya; Sridharan, Sucheendran; Black, William C., and Yu, Baiying, <i>Iowa State University</i>
WPA9-8	Harmonic distortion in CMOS current mirrors Bruun, Erik, Technical University of Denmark
WPA10	Oversampled and Sigma-Delta Techniques II - Lecture
	Professor Phillip E. Pace
	Naval Postgraduate School
WPA10-1	A Bandpass Sigma-Delta Demodulator Lyden, Colin and Keady, Aidan, University College Cork
WPA10-2	A 5GHz continuous time Sigma-Delta modulator
	implemented in 0.4um InGaP/InGaAs HEMT technology Miyashita, Takumi, Fujitsu Laboratories Ltd. Charry, Edgar, Laboratorio de Sistemas Integraveis Watanabe, Yuu, Fujitsu Laboratories Ltd. Olmos, Alfredo, Laboratorio de Sistemas Integraveis Nihei, Mizuhisa, Fujitsu Laboratories Ltd.
WPA10-3	A 50-MHz Continuous-Time Switched-Current Sigma- Delta Modulator Luh, Louis and Choma, John, <i>University of Southern California</i>
WPA10-4	A Multi-Bit Sigma-Delta Modulator with Interstage Feedback Chao, K. S. and Fang, L., Texas Tech University
WPA10-5	Approaches to Simulating Continuous-Time \Sigma\Delta Modulators Cherry, James A. and Snelgrove, Martin, Carleton University
WPA10-6	Architectural Coefficient Synthesis for the Implementation of Optimal Higher-Order Delta-Sigma Analog-to-Digital Converters Fiez, Terri S. and Naiknaware, Ravindranath, Washington State University
WPA10-7	Loop Delay and Jitter in Continuous-Time \Sigma\Delta Modulators Snelgrove, Martin and Cherry, James A., Carleton University
WPA10-8	Digital Correction of Non-Ideal Amplifier Effects in the MASH Modulator Davis, Alan J., Naval Undersea Warfare Ctr/Univ. of Rhode

Island; Fischer, Godi, University of Rhode Island

Device Modeling - Lecture Professor Kartikeya Mayaram

WPA11

	Washington State University
WPA11-1	Modeling, Extraction and Simulation of CMOS I/O
	Circuits under ESD Stress
	Li, Kang, Tag, Li, Ching-han, Tsai, Rosenbaum, E., Kang, S. M.
	University of Illinois at Urbana-Champaign
WPA11-2	Single-Event Effects in Micromachined PMOSFETs
	Mayaram, Kartikeya; Osman, Ashraf A., and Mojarradi,
WPA11-3	Mohammad, Washington State University A Generalized HSPICE Macro-Model for Pseudo-
WI AII-3	Spin-Valve GMR Memory Bits
	Das, Bodhisattva and Black, William C., <i>Iowa State University</i>
WPA11-4	Compact SPICE Modeling and Design Optimization of
	Low Leakage a-Si:H TFTs for Large-Area Imaging
	Systems
	Nathan, Arokia; Chamberlain, Savaas G., and Rambhatla, Murthy,
	University of Waterloo
WPA11-5	SPICE Model for Mechanically Stressed
	Device/Circuit Simulation
	Maier, Christoph H.; Mayer, Michael; Vogt, Rolf; Baltes, Henry, and Steiner, Ralph, Swiss Federal Institute of Technology
WPA11-6	Rapid Extraction of Capacitance in a-Si Imaging
	Arrays
	Nathan, Arokia and Pham, Hoan H., University of Waterloo
WPA11-7	An Efficent MOS Transistor Charge/Capacitance
	Model with Continuous Expressions for VLSI
	Jen, Steve; Sheu, Bing, and Kwon, Jay, University of Southern California
WPA11-8	Wavelet-Based Galerkin Method for Semiconductor
WI AII-0	Devices Simulation
	Chan, Chung-Kei, Thomas The Chinese University of Hong Kong
	Chan, Chung-Kei, Thomas The Chinese University of Hong Kong
TID 144	
WPA12	Filters and Electronics Circuits - Lecture
,,	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University
WPA12 WPA12-1	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter
WPA12-1	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California
,,	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture
WPA12-1	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers
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WPA12-1 WPA12-2	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers
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WPA12-1 WPA12-2 WPA12-3	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University
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WPA12-1 WPA12-2 WPA12-3	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University
WPA12-1 WPA12-2 WPA12-3	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying
WPA12-1 WPA12-2 WPA12-3	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor
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WPA12-1 WPA12-2 WPA12-3 WPA12-4 WPA12-5	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor Jun, Sibum, Pohang University of Science and Technoloy Analysis of Limit-Cycle Oscillations in a Log-Domain Filter
WPA12-1 WPA12-2 WPA12-3 WPA12-4 WPA12-5	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor Jun, Sibum, Pohang University of Science and Technoloy Analysis of Limit-Cycle Oscillations in a Log-Domain Filter Ferrer, Enrique, Motorola, Inc.
WPA12-1 WPA12-2 WPA12-3 WPA12-4 WPA12-5 WPA12-6	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor Jun, Sibum, Pohang University of Science and Technoloy Analysis of Limit-Cycle Oscillations in a Log-Domain Filter Ferrer, Enrique, Motorola, Inc. Fox, Robert, University of Florida
WPA12-1 WPA12-2 WPA12-3 WPA12-4 WPA12-5	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor Jun, Sibum, Pohang University of Science and Technoloy Analysis of Limit-Cycle Oscillations in a Log-Domain Filter Ferrer, Enrique, Motorola, Inc. Fox, Robert, University of Florida Large Signal Models for Oscillator Design
WPA12-1 WPA12-2 WPA12-3 WPA12-4 WPA12-5 WPA12-6	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor Jun, Sibum, Pohang University of Science and Technoloy Analysis of Limit-Cycle Oscillations in a Log-Domain Filter Ferrer, Enrique, Motorola, Inc. Fox, Robert, University of Florida Large Signal Models for Oscillator Design Kukk, Vello, Tallinn Technical University
WPA12-1 WPA12-2 WPA12-3 WPA12-4 WPA12-5 WPA12-6	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor Jun, Sibum, Pohang University of Science and Technoloy Analysis of Limit-Cycle Oscillations in a Log-Domain Filter Ferrer, Enrique, Motorola, Inc. Fox, Robert, University of Florida Large Signal Models for Oscillator Design Kukk, Vello, Tallinn Technical University An Approximate Analytical Approach for Predicting
WPA12-1 WPA12-2 WPA12-3 WPA12-4 WPA12-5 WPA12-6	Filters and Electronics Circuits - Lecture Professor Ray Chen, San Jose State University Stability of a Continuous-Time State Variable Filter Bakken, Tim and Choma, John, University of Southern California A new direct digital frequency synthesizer architecture for mobil transcievers Ragaie, Hani F. and Hegazi, Emad, In Shams University A Second-Order Log-Domain Bandpass Filter for Audio Frequency Applications Edwards, R. Timothy and Cauwenberghs, Gert, Johns Hopkins University A Theory of Information Network Analyzer PPN Watanabe, Hitoshi and Shinomiya, Norihiko, Soka University CMOS Precision Half-Wave Rectifying Transconductor Jun, Sibum, Pohang University of Science and Technoloy Analysis of Limit-Cycle Oscillations in a Log-Domain Filter Ferrer, Enrique, Motorola, Inc. Fox, Robert, University of Florida Large Signal Models for Oscillator Design Kukk, Vello, Tallinn Technical University

Professor Tsuhan Chen

Multimedia/Communications - Poster

WPA13

	Troiceson Teamen Chen
	Carnegie Mellon University
WPA13-1	Low Complexity Equalization for Cable Modems Lemonds, Carl; Wolf, Tod D., and Gatherer, Alan, Texas Instruments Inc.
WPA13-2	
WI A13-2	A Consideration on the Computational Requirements
	of Blind Equilization Using the Orthogonal Project Furukawa, Toshihiro, Fukuoka Institute of Technology
	Matsumoto, Hiroki, Maebashi Institute of Technology
	Kitaoka, Yoshihiro, Fukuoka Institute of Technology
WPA13-3	Four step genetic search for block motion estimation
***************************************	So, Man F. and Wu, Angus, City University of Hong Kong
WPA13-4	A Novel MPEG Audio Degrouping Algorithm
W17113-4	Chen, Liang-Gee and Tsai, Tsung-Han, National Taiwan Univ.
WPA13-5	A Robust Algorithm for Formant Frequency
WI /III5-5	Extraction of Noisy Speech
	Shimamura, Tetsuya; Zhao, Qifang, and Suzuki, Jouji,
	Saitama University
WPA13-6	Realization of multiwavelet-based transform kernels
WI AI3-0	for image coding
	Rieder, Peter; Nossek, Josef A., and Schimpfle, Christian
	V., Technical U. of Munich
WPA13-7	Asynchronous VLSI Architectures for Huffman
***************************************	Codecs
	Sauerwein, Helmut and Hauck, Oliver F., Darmstadt University of
	Technology
WPA13-8	A Perceptual Based Rate Control Scheme For
***************************************	MPEG-2
	Chan, S.C., The University of Hong Kong
WPA13-9	Fast Time Scale Modification Using Envelope-
***************************************	Matching (EM-TSM)
	Wong, Wai Chuen and Au, Oscar, The Hong Kong University of
	Science and Technology
WPA13-10	Performance Study of Time Delay Estimation in a
***************************************	Room Environment
	Kot, Alex C.; Er, Meng H., and Jian, Ming, Nanyang
	Technological University
WPA14	Neural Networks - Poster
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Professor Mona Zaghloul
	George Washington University
WPA14-1	Low Complexity CMOS Array for Approaching
	Assignments
	Candenas, Jose A.; Nava, Luis, and Castaneda, Felipe,
****	CINVESTAV-IPN
WPA14-2	An Artificial Model for Biological Computation and
	Control for a Locomotion System
	Wooten, E. Curran K., U. S. Naval Academy
****	Newcomb, Robert, University of Maryland
WPA14-3	An efficient method of automatical feature extraction
	and target classification
****	Jiao, LiCheng and Zhang, Ynning, Xidian University
WPA14-4	Pseudorandom Generator based on Clipped Hopfield
	Neural Network
	Cheng, L.M. and Chan, Chi-Kwong, City Univ. of Hong Kong
WPA14-5	Global Stability of a Larger Class of Dynamical Neural
	Networks
	Networks Arik, sabri, <i>Istanbul University</i>
WPA14-6	Networks

WE	DNESDAY – June 3, 1998 (Afternoon)						
	Leblebici, Yusuf and Schmid, Alexandre, Swiss Federal Institute of Technology (EPFL)						
WPA14-7	Car plate recognition by neural networks and image						
	processing Orlandi, Gianni; Di Claudio, Elio D.; Parisi, Raffaele and						
	Lucarelli, Gabriele, University "La Sapienza" Architecture and design methodology of the RBF-DD a						
WPA14-8							
	neural network Mehrez, Habib and Aberbour, Mourad, LIP6/CAD-VLSI Lab.						
WDA140	University of Paris 6						
WPA14-9	Hardware implementation of post retinal processing using analog VLSI circuits						
	Akers, Lex A., <i>University of Texas at San Antonio</i> Satakopan, S. and James, S., Arizona State University						
WPA14-10	High Performance Programmable Bi-Phase Pulse						
	Generator Design for a Cochlear Speech Processor						
WPA14-11	Ay, Suat; Zeng, Fan-Gang, and Shue, Bing, USC Pulse Stream based CNN Hardware Implementation						
	Colodro, Francisco, Escuela Superior de Ingenieros						
WPA14-12	Design of Cellular Neural Networks with Space- Invariant Cloning Template						
	Liu, Derong, Stevens Institute of Technology						
WPA14-13	Lu, W. S, University of Victoria On the Stability of CNN's with continuous time delay						
WFA14-13	Liao, Xiaofeng and Yu, Juebang, University of Electronic Science						
WD 4 1 4 1 4	and Technology; Wang, Michelle, Univ. of Southern California						
WPA14-14	Synthesis of a recurrent double-layer transistor network for early-vision tasks						
	Nazzaro, Antonio; Barbaro, Massimo, and Raffo, Luigi,						
WPA14-15	University of Cagliari Harmonic Retrieval Using Higher-Order Statistics and						
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Hilbert Transform						
	Zemin, Liu and Shenghong, Li, Beijing University of Posts and Telecommunications						
WPA14-16	Segmentation Coding for Object-Based Attentive						
	Selection Systems Wilson, Charles S., Georgia Institute of Technology						
	Morris, Tonia G., Intel Corporation						
WPA14-17	DeWeerth, Stephen P., Georgia Institute of Technology Current-Mode Truth Value Evaluation Circuits for						
***************************************	Complementary Fuzzy Logic Systems						
	Yu, Gwo-Jeng; Chen, Chuen-Yau, and Liu, Bin-Da, <i>National Cheng Kung University</i>						
WPA14-18	A Hybrid Fuzzy Neural Decoder for Convolutional						
	Codes						
	Wu, C., City University of Hong Kong; Zhu, Wei-Ping, Univ. of Elec Sci Tech.; Nakamura, Shogo, Tokyo Denki University						
WPA14-19	A New Edge-Preserving Smoothing Filter Based on						
	Fuzzy Control Laws and Local Features Wada, Yuji; Hinamoto, Takao, and Muneyasu, Mitsuji,						
******	Hiroshima University						
WPA14-20	Current-Mode Circuit to Realize Fuzzy Classifier with Maximum Membership Value Decision						
	Tsao, Ju-Ying; Chen, Chuen-Yau, and Liu, Bin-Da, National						
WPA14-21	Cheng Kung University A novel Cmos analogue fuzzy inference processor						
***************************************	Song, Peter C.; Quigley, Steven F., and Pammu, Sridhar,						
	University of Birmingham						
WPA14-22	Mixed-Mode VLSI Implementation of Fuzzy ART						
	Abshire, Pamela A.; Cohen, Marc H., and Cauwenberghs, Gert, Johns Hopkins University						

Cellular Nonlinear Network for Digital Error

Kananen, Asko; Paasio, Ari, and Halonen, Kari A, Helsinki

WPA14-23

Correction

WPA14-24 A Fuzzy reasoning bases approach for ARMA order selection Kitajima, Hideo; Emura, Masafumi, and Haseyama, Miki, Hokkaido University **WPA15 Analog Circuits and Systems - Poster** Professor Todd R. Weatherford Naval Postgraduate School WPA15-1 7 Gbit/s Measurements on a 0.8 mm CMOS Line-Receiver Johansson, Henrik O., Linköping University WPA15-2 AlGaAs/GaAs HEMT 5-12GHz integrated system for an optical receiver Charry, Edgar; Olmos, Alfredo, and Reina, Rodrigo, Laboratorio de Sistemas Integraveis WPA15-3 Multiple 1:N Interpolation FIR Filter Design Based on a Single Architecture Kang, In and Yeon, Kwang-Il, ETRI WPA15-4 VLSI Architectures for weighted order-statistic filters Lucke, Lori, Minnetronix Inc. WPA15-5 Analog CMOS design of the incremental credit assignment scheme.... Siskos,S.; Vlassis, S.; Hatzopoulos, Alkis A., and Petrides, Kehapious V., Aristotle University of Thessaloniki WPA15-6 **MOSFET Stair-Shaped I-V Circuit and Applications** Jun, Sibum, Pohang University of Science and Technoloy WPA15-7 Statistical Design of a Low-Voltage Square-Law CMOS Cell Tarim, Tuna B. and Ismail, Mohammed, Ohio State University A Novel Digitally Controlled CMOS Current Follower WPA15-8 for Low Voltage Low Power Applications Elwan, Hassan and Ismail, Mohammed, The Ohio State University WPA15-9 An Analytical salution to a Class of Oscillators and Its **Application to Filter Tuning** Pavan, Shanthi and Tsividis, Yannis, Columbia University WPA15-10 A High Precision Current Minnor/Devider Friedman, Eby G., University of Rochester WPA15-11 **Active Capacitance Multipliers Using Current** Conveyors Di Cataldo, G., University of Catiana WPA15-12 A (+/-) 1.5V CMOS four-quaudrant analog multiplier using 3GHz Analogue Squaring Circuits Hong, Wei, Thomson Multimedia Li, Simon, National Yunlin University of Science and Tech Lin, Kuang, Thomson Multimedia WPA15-13 An Autozeroing Floating-Gate Second-Order Filter Stanford, Theron, California Institute of Technology Diorio, Chris, University of Washington Hasler, Paul E., Georgia Institute of Technology Minch, Bradley A., Cornell University WPA15-14 **Design Phase Equalizers Using Phase Delay** Characteristic Noceti Filho, Sidnei: Carvalho, Delmar B., and Seara, Rui, LINSE/EEL/CTC/Federal & University of Santa Catarina WPA15-15 High-speed D/A converter using resonant tunneling diodes Chren, William A., Grand Valley State University WPA15-16 **New Switched-Current Circuits for Nonlinear Signal**

Processing

Zeng, Xuan and Tang, PuShan, Fudan University Tse, C.K., Hong Kong Polytechnic University

WEDNESDAY – June 3, 1998

University of Technology

(Afternoon)

	amplifiers
	Palmisano, Giuseppe and Salerno, R., <i>Universita di Cantania</i>
WPA15-18	Switched-capacitor impedance simulation circuits
***************************************	realized with current conveyor
	Ono, Toshio, Saitama institute of technology
WPA15-19	A Simple CMOS Digital Controlled Oscillator with
	high resolution and linearity
	To, Cheuk-Him and Chan, Cheong-Fat, The Chinese University of
	Hong Kong
WPA15-20	On Optimizing Micropower MOS Regulated Cascode
	Circuits on Switched Current Techniques
	De Lima, J.A., Universidade Estadual Paulista
WPA15-21	Elimination of nonlinear clock feedthrough in
	component-simulation switched-current circuits
	de Queiroz, Antonio Carlos and Schechtman, Jones, Universidade
	Federal do Rio de Janeiro
WPA15-22	Analog Building Blocks for a Sampled Data Fast
	Wavelet Transform CMOS VLSI Implementation
	Ramirez-Angulo, Jaime, and Gonzalez- Altamiran, Gerardo,
	New Mexico State University
WPA15-23	An Area Efficient Time-Interleaved Parallel Delta-
	Sigma A/D Converter
	Eshraghi, Aria and Fiez, Terri S., Washington State University
WPA15-24	Program Delivery Control with On-Screen Display
	Lee, Chew Peng, Siemens Components Pte Ltd Abler, Michael, Siemens Semiconductor, Siemens AG
	Abiet, Michaet, Stemens Semiconductor, Stemens AG
WPB4	Field Programmable Gate Arrays - Lecture
	Professor Sachin Sapatnekar
TIDD 4.4	University of Minnesota
WPB4-1	Using PLAs to design Universal Logic Modules in
	FPGAs
IVDD 4.3	Wong, Martin and Lee, Kok Kiong, University of Texas at Austin
WPB4-2	FPGA Mapping of Sequential Circuits with Retiming Shragowitz, Eugene, University of Minnesota
	Lee, Jun-yong, Hong-ik University
WPB4-3	RAISE: A Detailed Routing Algorithm for SRAM
WI D4-3	Based Field-Programmable Gate Arrays using
	Multiplexed Switches
	Baena, Vicente; Torralba, Antonio, and Aguirre, Miguel Angel,
	Escuela Superior de Ingenieros; Faura, Julio, Sidsa
	Franquelo, Leopoldo G., Escuela Superior de Ingenieros
WPB4-4	Rapid Prototype of a Fast Data Encryption Standard
	With Integrity Processing for Cryptographic
	Applications
	Bouaziz, Samir, Universite' Paris XI
	Guendouz, Hassina, Ecole Centrale d' Electronique-ECE

A replica biasing for constant-gain open-loop

WPA15-17

(Afternoon)

WPB13 Circuits and Systems for Communication Networks II - Poster

Professor Joseph Kahn University of California, Berkeley Dr. Chung-Sheng Li

	IBM T. J. Watson Research Center
WPB13-1	Compile-time Priority Assignment and Re-routing for
	Communication Minimization in Parallel Systems
	Surma, David R.; Kogge, Peter, and Sha, Edwin, University of Notre Dame
WPB13-2	A VLSI Design of Dual-Loop Automatic Gain Control
	for Dual-Mode QAM/VSB CATV Modem
	Shiue, Muh-Tian and Chorng-kuang, Wang, National Central
	University
WPB13-3	Routing Multipoint Connection in Computer
	Networks
	Zemin, Liu and Wensheng, Sun, Beijing University of Posts and Telecommunications
WPB13-4	Dynamic Routing Algorithms in ATM Networks
WI DI3-4	Liu, Zemin and Feng, Gang, Beijing University of Posts and
	Telecommunications
WPB13-5	A New Memory Controller for the Shared MultiBuffer
	ATM Switch with Multicast Functions
	Hsieh, Chih-Yuan and Chang, Robert, National Chung-Hsing
	University
WPB13-6	Scheduling Algorithm for Rusing Dynamic Weighted
	Round Robineal-time Burst Traffic
	Kwon, Taeck-Geun; Lee, Sook-Hyang, and Rho, June-Kyung, LG
	Information & Communications, LTD.
WPB13-7	Design and Implementation of an ATM Segmentation
	Engine with PCI Interface
	Jun, JongArm; Kim, Chan, and Lee, KyouHo, Electronics and Telecommunications Research Inst.
WPB13-8	A Novel Neural Estimator for Admission Control and
DIE 0	Buffer Design in ATM Network
	Liu, Zemin and Zhang, Liang, Beijing University of Posts &
	Telecommunications
WPB13-9	Motion-based Lost Packet Recovery in RTSP H.263
	Video
	Kuo, CC.J. and Chung, Yon J., Univ. of Southern California
WPB13-10	A transmitting and receiving method for CDMA
	communications over Electrical Power Lines
	Okazaki, Hideaki, Gifu National College of Technology
WPB13-11	Network Design and Control For Multipoint-to-
	Multipoint Communications
	Kinoshita, Kazuhiko, School of Engineering
	Murakami, Koso, Osaka University Soeda, Junichiro, Matsushita Electric Industrial Co., LTD
	Takine, Tetsuya, School of Engineering
	Yamai, Nariyoshi, Osaka University
WPB13-12	A Multi-rate Channelized Wireless LAN System with
	Fixed Channel Assignment
	Lam, Chi-Wai and Ko, Tsz-Mei, Hong Kong University of
	Science and Technology
WPB13-13	Base station selection algorythems in microcellular
	mobil radio networks
	Nofal, Mostafa, Faculty of electronic engineering

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Aas, Einar J.	MPA14-3	Aronhime, Peter	MAA15-4
Abdolhamid, Amir	MAA5-3	Arrigo, Jeanette F.	MAA13-21
Abel, A.	TAA5-2	Arsintescu, Bogdan	TAA12-8
Aberbour, Mourad	WPA14-8	Arslan, T.	MAA10-4
Abler, Michael	WPA15-24	Arslan, Tughrul	TAA15-3
Abou-Allam, Eyad	MAA13-10	Arslan, Tughrul	TAB13-8
Abshire, Pamela A.	WPA14-22	Arslan, Tughrul	WAA13-18
Abur, Ali	MPA12-8	Arslan, Tughrul	WAA13-23
Achar, R.	MPA10-1	Arslan, Tughrul	WPA6-8
Achar, R.	MPA10-2	Ashrafzadeh, Farhad	WAA13-10
Acharya, Tinku	WAB6-4	Ashton, Robert W.	MAA14-13
Acosta, Simone M.	MAA15-2	Ashton, Robert W.	MAA14-22
Adachi, Yoshihiro Adams, Michael D.	TAA15-14	Ashton, Robert W. Ashton, Robert W.	MAB14-24
Agamennoni, Osvaldo	MPA13-1	Ashton, Robert W.	TAB14-2 TAB14-11
Agathoklis, Pan	MPA1-4	Ashur, Ahmed	TAB13-4
Aguirre, Miguel Ange		Asmanis, Georgios S.	WAA8-3
Ahmad, I.	MAA2-5	Au, Oscar	MPA13-8
Ahmad, I.	WAA12-6	Au, Oscar	WAA12-9
Ahmad, I.	WAA4-2	Au. Oscar	WAA4-3
Ahmadi, M.	MPA15-4	Au, Oscar	WPA13-9
Ahmadi, M.	MPA3-5	Aubergne, Daniel	MPA10-7
Ahn, Jae-Woo	TAA15-20	Ay, Suat	WPA14-10
Ahn, Youngho	WAA14-15	Azemard, Nadine	MPA10-7
Ahola, Rami	MPA9-1	В	
Akansu, A.	MPA2-6		
Akers, Lex A.	MPA3-2	Babic, Hrvoje	TAB14-1
Akers, Lex A.	WPA14-9	Baccarani, Giorgio	MPA15-15
Akin, I.A.	TPB14-7	Baccarani, Giorgio Baena, Vicente	WAA3-6
Akkarakaran, Sony	MAA2-6	Báez-López, David	WPB4-3 MAA15-12
Aksin, Devrim Y.	MAA15-15	Bakken, Tim	WPA12-1
Al-Besher, Badr	TAB13-4	Baltes, Henry	WPA11-5
Al-Hashimi, B.M.	MAA15-23	Banerjee, Prithviraj	MAA10-7
Al-Hashimi, Bashir	WAA13-24	Banerjee, Prithviraj	WPA4-1
Al-Hashimi, Bashir	WAA15-6	Bao, Zheng	MAA1-8
AL-Jumah, Abdullah Alattar, Adnan M.	WPA6-8	Bao, Zheng	WPA1-5
Albicki, Alexander	TPB13-5 MAA4-12	Baras, John S.	WAA4-5
Aldebert, Patrick	WAA15-1	Barbaro, Massimo	WPA14-14
Ali, Mahmoud A.	WAA5-7	Baru, Marcelo D.	MPA15-21
Alippi, Cesare	TPB3-4	Baruqui, Fernando P.	WAA9-1
Alku, Paavo	TAA4-2	Baruqui, Fernando P.	WAA9-8
Allen, Jont	TAA11-1	Baschirotto, Andrea	MPA6-2
Allen, Phillip E.	MAA13-22	Baschirotto, Andrea	TAA14-10
Aloqeely, Mohammed	1 A. WPA4-2	Bastos, Teodiano F.	TPB11-4
Alquie, G.	MAA9-4	Basu, Sankar	MPA1-3
Alvandpour, Atila	WAA6-3	Batterywala, Shabbir H	
Alvarez-Marquina, A.	TAA13-5	Battogtokh, Dorjsuren Baturone, Iluminada	WPA7-8 WPA8-3
Amourah, Mezyad	MPA9-5	Bauer, Andreas	MAA7-4
Anitescu, M.	MPA2-3	Bax, Walt T.	TPB5-2
Antoniou, Andreas	MAA2-3	Bayoumi, Magdy	WPA4-3
Antoniou, Andreas	MPA2-2	Bayoumi, Magdy	MAA11-8
Antoniou, Andreas	MPA13-1	Becker, Bernd	TAA15-15
Antoniou, Andreas	WAA5-3	Bego, Lauro J.	MAA12-7
Apsel, Alyssa B.	WAA3-1	Begovich, O.	TAB14-7
Aravena, Jorge L.	WPA1-1	Ben Letaief, Khaled	TPB5-3
Arena, Paolo	WPA3-7	Benabes, Philippe	WAA15-1
Arik, Sabri Arikan, Orhan	WPA14-5 TPR1-3	Benboudjema, Kamel	MAA9-4
Arnaud, Alfredo	TPB1-3 MPA15-21	Benini, Luca	MAA6-2
7 minuu, 7 mireuo	WII / XI J = 2 I	Beraldin, John A.	WPA2-2

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Berg, Yngvar	MAA12-2	Carneiro, N.C. F.	WAA14-14
Berger, T.W.	MPA3-4	Carreto-Castro, Flora	
Bernier, F.	WPA2-2	Carro, Luigi	MAA12-7
Berns, Daniel W.	WPA7-1	Carroll, T.L.	WAA10-2
Berovici, E.	WAA12-2	Carroll, T.L.	WAA10-2
Bertazzoni, Stefano	TAB13-1	Carroll, T.L.	WAA10-3
Besl, Paul	WPA2-1	Carvalho, Delmar B.	WPA15-14
Biel, Domingo	WAA12-4	Castaneda, Felipe	WPA14-1
Biey, Mario	MAA14-23	Castello, R.	TAA14-10
Bisdounis, Labros	WAA15-18	Castleman, Kenneth	WAA2-1
Bistritz, Yuval	MPA1-8	Castleman, Kenneth	WAA2-2
Bitter, Doug	MPA1-2	Cattet, Stephane	MAA15-11
Black, William C.	MPA9-4	Cauwenberghs, G.	MPA3-9
Black, William C.	WPA9-7	Cauwenberghs, Gert	MAA3-6
Black, William C.	WPA11-3	Cauwenberghs, Gert	WAB7-3
Blais, F.	WPA2-2	Cauwenberghs, Gert	WPA3-3
Blaquiere, Yves	WAA14-17	Cauwenberghs, Gert	WPA12-3
Bo, G.M.	MPA3-6	Cauwenberghs, Gert	WPA14-22
Bobba, Sudhakar	MAA10-1	Caverly, Robert H.	MAA13-1
Boche, Holger	MAA14-9	Caviglia, D.D.	MPA3-6
Boella, G.	TAA14-10	Cetin, Enis	WPA1-8
Boemo, Eduardo	TAB6-4	Chaiken, Seth	MPA7-2
Bogason, Gudmundı		Chaing, Jen-Shiun	MPA14-21
Bohannon, John	WPAA5-2	Chaing, Jen-Shiun	TPB12-2
Bolcato, P.	WAA15-15	Chakrabarti, Chaitali	WAA14-12
Bonaiuto, Vincenzo	WPA3-2	Chamberlain, Savaas	
Bonet-Dalmau, Jordi		Chan, Cheong-Fat	WPA15-19
Borshukov, George	WPA2-8	Chan, Chi-Kwong	WPA14-4
Bosse, Eloe	MPA11-9	Chan, Chung-Kei T.	WPA11-8 MAA12-1
Bouaziz, Samir Bouguet, Jean-Yves	WPB4-4 WPA2-3	Chan, Philip C.H. Chan, S.C.	WPA13-8
Boukadoum, M.	MAA9-4	Chan, Shing-chow	TPB13-2
Bouridane, Ahmed	TAB13-4	Chan, Shueng-Han G	
Brachtendorf, H.G.	TPB10-4	Chan, Yuk-Hee	MAA4-5
Brambilla, Angelo	WAA14-1	Chandra, Charu	TAA4-5
Branciforte, Marco	WPA3-7	Chandrakasan, Anant	
Branciforte, Marco	WPA3-7	Chandramouli, R.	MAA5-4
Brannen, Robert A.	MPA15-9	Chandramouli, R.	MPA13-17
Brennan, Robert	TAA11-2	Chang, Chip-Hong	TAA15-10
Bresch, Helmut	MPA15-5	Chang, Chip-Hong	TAA15-11
Bright, M.S.	MAA10-4	Chang, Hao-Chieh	MPA13-11
Briozzo, Luciano	TPB3-4	Chang, Hao-Chieh	MPA13-21
Broderson, Robert	WPA5-4	Chang, Hun-Hsien	TAA14-9
Brown, Donald E.	MPA11-5	Chang, Joseph S.	MPA15-19
Bruun, Erik	WPA9-8	Chang, Joseph S.	MPA15-24
Buhmann, Sitta	WAA2-6	Chang, Molin	WAA15-14
Bull, David R.	WAA13-19	Chang, Pen-Yiing	MAA3-5
Byung-Moo Min	TAA10-2	Chang, Pen-Yiing	MPA13-21
C		Chang, Robert	WPB13-5
Cabodi, Gianpiero	WAA15-13	— Chang, Shue-Lee	TAA13-12
Cai, Jianfei		Chang, Yao-Wen	TAA15-1
Campolucci, Paolo	MPA13-5	Chantrapornchai, C	WAA11-8
Campolucci, Paolo	TAA3-6 WAA15-13	Chao, K.S.	WPA10-4
Canavero, Flavio G.	MPA7-6	Charry, Edgar	WPA10-2
Candenas, Jose A.	WPA14-1	Charry, Edgar	WPA15-2
Cantin, Marc-Andre	WAA14-17	Chatzigeorgiou, A. N	
Cardarilli, Gian Carl		Chatzigeorgiou, A. N	
Cardarilli, Gian Carl		Chau, Lap-Pui	TAB13-5
Carlosena, Alfonso	TAA14-7	Chau, Paul M.	MAA13-21
Carmeli, S.	TAB14-8	Chen, Chang W.	MAA4-3
Carmon, D.	1111140		

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	MPA13-5	
Chen, Chuan Van		1 ,
Chen, Chuen-Yau	WPA14-17	Ching, Pak Chung MAA1-3 Chiricescu, Silviu TAB6-1
Chen, Chuen-Yau	WPA14-20	*
Chen, F.	WAA12-8	Cho, Kwang-Bo MPA4-4
Chen, F.	WAB7-1	Choi, Jinho MAA1-5
Chen, F.	WPA7-2	Choi, K.H. WAA12-8
Chen, Fei	TAA15-21	Choi, Kiyoung MPA14-17
Chen, Guarana	TAA13-2	Choma, John MPA15-12
Chen, Guanrong	MAA14-6 WPA7-1	Choma, John WPA10-3 Choma, John WPA12-1
Chen, Guanrong	WPA7-7	· · · · · · · · · · · · · · · · · · ·
Chen, Guanrong Chen, Heng-Chou		Chorng-kuang, Wang TAA8-2 Chorng-kuang, Wang WPB13-2
	TAA4-7 MPA6-4	Chorng-kuang, Wang WPB13-2 Chou, Mike WAA15-22
Chen, Henry Chen, Jian-Song	MPA15-14	Chowdhury, Mohamed TPB15-1
Chen, Jie	MPA13-10	Chren, William A. WPA15-15
Chen, Juinn-Tsair	MAA5-5	Christensen, Kaare MAA13-7
Chen, Li	MPA13-14	Chrzanowska-Jeske,M TAA15-12
Chen, Liang-Gee	MAA11-4	Chua, L.O. WAA10-5
Chen, Liang-Gee	MPA4-2	Chun, Byungjin TAA13-10
-	MPA13-11	
Chen, Liang-Gee Chen, Liang-Gee	MPA13-11	Chung, Henry WAA7-1 Chung, Henry WAA7-3
Chen, Liang-Gee	WPA13-4	
Chen, Oscal TC.	MAA13-24	Chung, Henry WAA12-1 Chung, Henry WAA12-7
Chen, Oscal TC.	TAA4-7	
Chen, Oscal TC.	TAA4-7	Chung, Jin-Gyun WAA13-1 Chung, Yon J. WPB13-9
Chen, Oscal TC.	WAA13-16	Chung-Yuk, Or WAA15-8
Chen, Pei-yin	MAA5-5	Ciezki, John G. MAA14-13
Chen, Pei-yin	MAA10-6	Ciezki, John G. MAA14-13
Chen, Pei-yin	MAA14-7	Ciezki, John G. TAB14-2
Chen, Pei-yin	MPA13-7	Ciezki, John G. TAB14-2
Chen, Pei-yin	MPA13-13	Cijvat, Ellie MPA6-1
Chen, Pei-yin	MPA13-21	Cilingiroglu, Ugur MAA15-15
Chen, Pei-yin	TAA14-8	Ciminiera, Luigi MAA13-16
Chen, Pei-yin	TPB12-2	Ciocoiu, Iulian TAA3-8
Chen, Pei-yin	WA1A5-14	Cioffi, John M. WAA12-3
Chen, Po-Yueh	WAB6-4	Coffman, James W. MAA11-1
Chen, Richard M.	WAA15-20	Cohen, Marc H. MAA3-6
Chen, Sau-Gee	TAA1-4	Cohen, Marc H. WPA14-22
Chen, Sau-Gee	TAB13-6	Colbeth, Richard TPB15-6
Chen, Sau-Gee	TPB4-3	Cole, Agnim I. MAA14-12
Chen, Sze-sheng	MPA4-6	Colodro, Francisco WPA14-11
Chen, Tsuhan	MAA11-6	Colonius, Fritz WPA7-3
Chen, Tsuhan	WAA12-7	Connelly, Joseph A. TAA14-3
Chen, Yiqin	MPA9-6	Connelly, Joseph A. TPB15-9
Chen, Yiqin	MPA15-7	Conti, M. WPA9-2
Cheng, L.M.	WPA14-4	Copeland, Miles A. TPB5-2
Cheng, Sheu-Chih	MPA13-3	Copeland, Miles A. TPB14-10
Cheng, Sheu-Chih	MPA13-3	Cornish, Jack MPA15-12
Cheng, ZhiHong	MPA15-19	Corron, N.J. WAA10-6
Chengquan, Xia	MAA14-17	Cortelazzo, Guido M. WPA2-9
Cherry, James A.	WPA10-5	Costa, Alfredo WAA8-1
Cherry, James A.	WPA10-7	Costa, Joao P. WAA15-22
Cheung, Chok-Kwa		Costello, Daniel J. MAA4-2
Cheung, Paul Y.S.	WPA6-4	Cournoyer, L. WPA2-2
Chiang, Tihao	MPA13-9	Cousseau, J.E. WAA1-7
Chiang, David H.	MPA8-1	Cremoux, Severine MPA10-7
Chiang, Jen-Shiun	MPA14-20	Criscione, Marcello WAA3-7
Chibli, H.	MPA3-6	Crookes, Danny TAB13-4
Chickamenahalli, S.		Cunha, Ana A. MAA15-2
Chien, Li-Yu	TAA8-2	Cunha, Ana A. TAA8-7

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Czarkowski, Dariusz	WAA12-3	Diorio, Chris TPB3-1
D		Diorio, Chris WPA8-5 Diorio, Chris WPA15-13
Dachselt, F.	TPB9-3	Djahanshahi, H. MPA3-5
Dai, Liang	WAA-3	Djupsjobacka, Anders MAA13-3
Daldoss, Lidia	WAA4-8	Dmitriev, A. TAA5-6
Damera-Venkata, N.	WAA5-4	Doblinger, Gerhard WAA1-4
Damper, R.I.	WAA3-3	Dobrovlny, Petr MAA9-8
Dandache, Abbas	TPB5-1	Donate, P.D. WAA1-7
Daneshrad, Babak	MAA13-14	Dong, Yikui TAA12-5
Daneshrad, Babak	TAB13-9	Doretto, Gianfranco WPA2-9
Darley, Merrick H.	WAA6-2	DRAKAKIS, Emmanuel TAA9-3
Darlry, Merrick H.	WAA6-4	Drechsler, Rolf TAA15-8
Das, Bodhisattva	WPA11-3	Drechsler, Rolf TAA15-15
Davies, Anthony C.	MAA14-1	Drolshagen, Ansgar MPA14-12
Davies, Anthony C.	TPB7-2	Du, X. TAA15-24
Davis, Alan J.	WPA10-8	Dudek, Frank WAA15-6
Davis, Dennis W.	WAA1-2	Dufort, Benoit WPA6-3
de Figueiredo, Rui J.	MAA14-19	Dujardin, Eric WAA13-20
de Figuieredo, Rui J.	MAA3-1	Dunlap, Steven MPA15-1
de Lima, J.A. de Melo, Ana Cristina	WPA15-20	Dyer, Kenneth C. MAA8-5
de Queiroz, A. C. M.	WAA15-9 WPA15-21	E
Debevec, Paul	WPA2-8	Ebrahimi, Touradj WPA2-4
Debyser, Geert	MAA9-6	Edwards, Brent TAA11-7
Dec, Alezsander	MAA13-9	Edwards, R. Timothy WPA12-3
Dec, Alezsander	MPA15-10	Egiziano, L. WAA12-6
Declercq, M.	MAA5-6	El-Masry, Ezz TAA9-2
Dedieu, H.	TPB9-4	EL-Shafei, Ahmed A. WPA3-8
Dedieu, Herve	MAA14-4	Ellervee, Peeter MAA13-3
Degrugillier, D.	MAA15-9	Elmasry, Mohamed I. MAA6-3
Dehollian, C.	MAA5-6	Elmasry, Mohamed I. MPA6-7
Delgado-Restituto, M.	TAA5-4	Elwan, Hassan WPA15-8
Demosthenous, A.	MPA15-6	Emura, Masafumi WPA14-24
Demosthenous, A.	MPA15-8	Endo, Tetsuro MAA14-3
Deng, Guang	WAA1-8	Endo, Tetsuro MAA14-11
Deng, Jie	MAA15-4	Endo, Tetsuro TAA7-8
Deng, Tian-Bo	WAA13-21	Enz, Christian MPA8-5
Deprettere, Ed F.	TAB13-10	Er, Meng H. WPA13-10
Desages, Alfredo	WAA15-11	Erdogan, Ahmet T. WAA13-18
Deshpande, S.	WAA12-8	Erdogan, Ahmet T. WAA13-23
Deshpande, Sachin G.	MPA13-6	Eriksson, Patrik MPA6-1
Deutschmann, R. A.	TPB15-11	Ertan, Gamze MAA3-2
Devlin, John C.	WAA1-8	Eshraghi, Aria WPA15-23
DeWeerth, Stephen P.	TPB7-3	Eskikurt, Halil Ibrahim TAB13-8
DeWeerth, Stephen P.	WAA3-2	Espinosa, Guillermo MAA15-12
DeWeerth, Stephen P.	WPA14-16	Etawil, Hussein A. WAA11-5
Di Cataldo, G.	WPA15-11	Eun, Seyoung WAA14-10
Di Claudio, Elio D.	WPA14-7	Evans, Brian L. TPB2-2
Di Grazia, Pietro Dias, Victor F.	WPA3-7	Evans, Brian L. WAA15-4
Dias, Victor F.	MAA15-19	\mathbf{F}
Dias, Victor F. Diaz-Sanchez, Alejand	TPB14-1 lro TPB4-1	Fahim, Amr MPA6-7
Diepenhorst, Marco	WAA14-18	Fahmy, M.M. MPA13-15
DiGrazia, Pietro	WPA3-7	Falkowski, Bogdan TAA1-3
Diniz, P.S.	WAA1-7	Falkowski, Bogdan TAA15-10
Diniz, Paulo S.	TAA13-1	Falkowski, Bogdan TAA15-11
Diniz, Paulo S.	WAA13-3	Fang, L. WPA10-4
Diorio, Chris	MAA15-16	Fant, Karl MAA12-8
Diorio, Chris	MPA3-1	Farooqui, Aamir A. WAB6-1
Diorio, Chris	MPA8-3	Faura, Julio WPB4-3
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Favalli, Lorenzo	TPB13-8	Furukawa, Toshihiro	WPA13-2
Fedi, G.	MAA9-3	G	
Feely, Orla	MAA14-15	Galias, Z.	WAA10-4
Femia, N.	WAA12-6	Galias, Zbigniew	MAA14-20
Feng, Gang	MAA1-7	Galton, Ian	TAA10-7
Feng, Gang	WPB13-4	Galton, Ian	WAB7-2
Feng, Wu-Shiung	WAA15-14	Galup-Montoro, C.	MAA15-2
Fernandez, Francisc		Galup-Montoro, Carlo	s TAA8-7
Fernandez-Maloign	WPA12-6	Galvez-Durand, F.	MAA15-17
Ferrer, Enrique	WAA8-1	Gandhi, Rajeev	WAA13-17
Ferri, Giuseppe Ferri, Giuseppe	WAA8-5	Garrido, Nuno	TAA9-5
Fettweis, Gerhard	MAA5-2	Gatherer, Alan	WPA13-1
Fidler, J.Kel	MAA15-18	Gatti, Umberto	MAA8-6
Fiez, Terri S.	MPA15-1	Gay-Bellile, Olivier	WAA13-20
Fiez, Terri S.	TAA10-6	Gazzoli, Giuseppe	MAA8-6
Fiez, Terri S.	WAA9-7	Ge, Yongmin	MAA13-4
Fiez, Terri S.	WPA10-6	Geiger, Randall	MPA9-5
Fiez, Terri S.	WPA15-23	Geiger, Randall	MPA9-6
Filanovsky, Igor	TPB15-4	Geiger, Randall	MPA15-7
Filiol, Norm M.	TPB14-10	Geiger, Randall	WPA9-5
Filoramo, P.	MPA15-20	Gerber, Martin	TAA15-7
Fiori, Simone	MPA5-4	Gerek, Omer N.	WPA1-8
Fiori, Simone	TAA3-2	Giakoumis, Ioannis	TPB13-10
Fischer, Godi	WPA10-8	Gielen, G.	MAA9-6
Fischer, Wolf-Joach	him WPA6-1	Gielen, G.	MAA9-8
Fitch, Osa	WPA7-5	Gierkink, Sander	MPA9-8
Flank, Steven	MPA11-8	Gilli, Marco	MAA14-23
Fogleman, E.	WAB7-2	Gilli, Marco	WPA12-8
Fong, W.C.	TPB13-2	Gingras, Donald F.	WAA5-1
Fortuna, Luigi	WPA3-7	Girard, Patrick Giustolisi, Gianluca	WPA6-6
Fossas, Enric	WAA12-4	,	MPA15-20
Fox, Robert M.	TPB12-1	Glenn, Ian Glorer, K.	MPA11-3 TAA14-5
Fox, Robert M.	WPA12-6	Gnudi, Antonio	MPA15-15
Franca, Felipe	MAA12-4	Goel, Manish	TPB6-1
Franca, Jose E.	MAA9-2	Goetz, Marco	TAA5-2
Franca, Jose E.	TAA9-5	Goetz, Marco	MAA7-5
Franca, Jose E.	TAA14-12	Goh, Chee-Kiang	TAA1-8
Franca, Jose E.	WAA9-1	Goldgeisser, Leonid B	
Franca, Jose E.	WAA9-2	Gomez-Vilda, Pedro	TAA13-5
Franca, Jose E.	WAA15-8	Gondim, Paulo L.	WAA5-4
Franchi, Eleonora	WAA3-6	Gonzalez-Altamirano,G	WPA15-22
Franquelo, Leopold		Gothenberg, Andreas	TPB14-8
Franquelo, Leopold		Goto, Mutsuaki	WAB6-3
Frattini, G.	TAA14-10	Gou, Bei	MPA12-8
Frazer, Mark Freitas, Roger A.C.	TAA15-16 WAA12-9	Goutis, Costas	TAA15-18
Freking, Robert A.	WAA12-9 WAA14-16	Granger, Eric	WAA14-17
Frey, Doug	TAA9-4	Granja, Edson	MAA12-4
Friedman, Eby G.	WAA6-1	Grassi, Giuseppe	MAA7-6
Friedman, Eby G.	WPA15-10	Grayver, Eugene	MAA13-14
Fu, Daihong	MAA8-5	Grayver, Eugene	TAB13-9
Fu, Jyun-Horng	WPA7-4	Green, Michael M.	MAA15-5
Fujii, Nobuo	WAA13-11	Green, Michael M.	TPB12-3
Fukui, Yutaka	MAA13-15	Greeneich, E.W.	MAA8-1
Fukui, Yutaka	MAA13-23	Grogan, Paul	WAA14-5
Fukui, Yutaka	TAA13-3	Gu, Guoxiang	WPA7-2
Fuller, Arthur	WAA13-9	Guaitini, Giovanni	WPA9-2
Fuller, Arthur	WAA13-10	Guendouz, Hassina	WPB4-4
Fung, Eula	TPB10-2	Gui, Xiang	WAA5-2
<u>.</u>		Guinee, Richard A.	TPB15-12

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Guinjoan, Francesc	TAA2-4	Hauschild, R.	TPB15-10
Guo, Jyh-Huei	MPA14-22	Hayashi, Takanori	MPA12-4
Guo, Jyh-Huei	WAA14-22	Hayashi, Takayuki	MAA8-2
Gupta, Sandhya	WPA9-7	Hayatleh, K.	WPA8-8
Gurkaynak, Frank K.	MPA14-4	He, Y.	WAA12-6
Gustavsson, Mikael	MAA8-7	Heald, Raymond	MPA14-15
H		Hegazi, Emad M.	WPA12-2
Haenggi, Martin	WPA3-5	— Hel-Or, Yacov	WAA2-4
Hafed, Mohamed M.	MPA10-6	Helfenstein, Markus	
Hahs, D.W.	WAA10-6	Hematy, Arman	TAA9-1
Hajimiri, Ali	MPA14-15	Henkelmann, Heigo	
Hajj, Ibrahim	MAA10-1	Hennig, Eckhard	MAA9-7
Hajjar, Ara	WPA6-2	Hentschel, Tim	MAA5-2 WAA2-7
Hakkinen, Juha	MAA13-20	Herpers, Rainer	W AA2-7 TPB7-4
Hall, David L.	MPA11-2	Herrera, Ruben	WAA6-2
Halonen, Kari A.	MAA13-19	Hill, Anthony Hiltenbrant, John	MAA11-7
Halonen, Kari A.	MAA13-6	Hinamoto, Takao	MPA1-5
Halonen, Kari A.	MPA6-3	Hinamoto, Takao	MPA1-7
Halonen, Kari A.	MPA9-1	Hinamoto, Takao	WPA14-19
Halonen, Kari A.	MPA9-2	Hiraiwa, Atsunobu	MPA13-2
Halonen, Kari A.	MPA9-7	Hiskens, Ian A.	MPA12-6
Halonen, Kari A.	MPA15-17	Ho, Chun-ying	TAA3-4
Halonen, Kari A.	MPA15-18	Ho, K.L.	TPB13-2
Halonen, Kari A.	TAA8-6	Hocevar, Dale E.	TAA15-19
Halonen, Kari A.	WPA8-1	Hölling, Matthias	TAA13-4
Halonen, Kari A.	WPA14-23	Holmberg, Johnny	WAA13-8
Halverson, Ranette H.	TAA15-4	Hong, Chang-Yu	TPB4-2
Hamilton, Alister	MPA15-13	Hong, Wei	WPA15-12
Hamilton, Samuel N.	TAA14-1	Horio, Yoshihiko	TPB7-4
Hang, Hsueh-Ming	MPA4-6	Hornung, G.	TAA14-5
Hang, Hsueh-Ming	MPA13-3	Horta, N.C.	MAA9-2
Hanna, Magdy T.	TAA1-1	Hossain, Ashfaq	MAA11-7
Haridasan, R.	WAA4-5	Hosticka, B.J.	TPB15-10
Harjani, Ramesh	WAA9-3	Hsieh, Chih-Yuan	WPB13-5
Harnefors, Lennart	WAA13-8	Hsieh, Jeff Y.	WAA4-8
Harp, Jeff	WPA5-2	Hsieh, Meng-Han	MPA5-3
Harris, John	MPA15-23	Hsu, Jah-ming	MPA5-5
Harris, John	TAB14-3	Hsu, Yaun-chung	TAA15-24
Harris, John G. Harrison, N.	MPA15-2 WPA2-2	Hsu-Tung, Chen	MPA13-21
Harrison, Reid R.	TAA14-6	Hua, Jia	TAA15-4
Hartimo, Iiro O.	TAB13-11	Huang, Aiping	TAB13-11
Hasan, Moh'd A.	MPA13-18	Huang, Chung-Lin	MAA3-5
Hasan, Moh'd A.	TPB13-4	Huang, Jiwu	MPA13-14
Hasegawa, Akio	MAA14-3	Huang, Po-Chiun	TAA8-2
Haseyama, Miki	TAB13-12	Huang, Sheng-Chiel	
Haseyama, Miki	WPA14-24	Huang, Yan-ping	MAA14-7
Hasler, Martin	MAA7-3	Huang, Yan-ping	MPA13-21
Hasler, Paul	TAA14-6	Huang, Yih-Fang	MAA4-2
Hasler, Paul	WAA3-1	Huang, Yuejin	WAA5-5
Hasler, Paul E.	MAA15-16	Huber, Andreas	WAA11-6
Hasler, Paul E.	MPA3-1	Huelsman, Lawrenc Huertas, Jose L.	
Hasler, Paul E.	MPA8-3	Huff, William	WPA8-3
Hasler, Paul E.	TPB3-1	Hughes, John B.	TAA10-7 WPA8-6
Hasler, Paul E.	WPA8-5	Hughes, John B.	WPA8-7
Hasler, Paul E.	WPA15-13	Hui, Ronny	MAA8-4
Hassoun, Marwan	MAA9-1	Hui, S.Y.	WAA7-1
Hatta, Koichi	WAB6-3	Hui, S.Y.	WAA7-3
Hatzopoulos, Alkis A		Hung, Ching-Yu	TAA15-19
Hauck, Oliver F.	WPA13-7	6,	

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Huppertz, J.	TPB15-10	Jiao, LiCheng	WPA14-3
Hurst, Paul J.	MAA8-5	Jin, Liang	MAA5-7
Hwang, Inchul	TPB13-1	Jin, Liang	MAA5-8
Hwang, J.N.	MPA13-6	Jin'no, Kenya	TAA7-6
Hwang, J.N.	WAA12-8	Jin'no, Kenya	TAA7-7
Hwang, Seung H.	MAA10-2	Joergensen, Allan	MAA13-7
I		Johansson, Håkan	MAA2-4
Iannuccelli, Manuele	e TAB13-1	 Johansson, Håkan Johansson, Henrik O. 	WAA13-22
Ichige, Koichi	WPA1-2	Johns, David A.	WPA15-1 MAA5-3
Igarashi, Ryo	MAA14-3	Johns, David A. Johns, David A.	TAA8-8
Iizuka, Fumitaka	WAA7-2	Johnson, Andrew E.	WPA2-6
Ikeda, Hiroaki	MPA13-2	Johnson, G.A.	WAA10-2
Ikeda, Hiroaki	WAA7-4	Joho, Marcel	TAA13-2
Ikehara, Masaaki	MPA2-8	Jonsson, Bengt E.	WPA8-4
Ikehara, Masaaki	TAA1-2	Jordan, Frederic	WPA2-4
Inagaki, Shuichiro	TPB11-3	Jorgensen, Ivan H.	MAA15-21
Ioinovici, A.	TAA2-2	Jou, Jer-Min	MAA10-6
Irving, William	MPA11-7	Jou, Jer-Min	MPA13-13
Ishii, Junya	TAB14-9	Juhola, Tarja	MAA13-3
Ishii, Rokuya	WPA1-2	Juhola, Tarja	MAA13-12
Ishiura, Nagisa	WPA4-4	Julian, Pedro	WAA15-11
Ismail, Mohammed	MPA15-9	Jullien, G.A.	MPA3-5
Ismail, Mohammed Ismail, Mohammed	WPA15-7	Jun, JongArm	WPB13-7
Ismail, Yehea I.	WPA15-8 WAA6-1	Jun, Sibum	MAA15-22
Isshiki, Tsuyoshi	WAA14-21	Jun, Sibum	WPA12-5
Itoh, M.	TAA5-7	Jun, Sibum	WPA15-6
Itoh, Yoshio	MAA13-15	Junibakti, Sanubari	TAA13-11
Itoh, Yoshio	TAA13-3	K	
Ivanov, Vadim	WPA9-1	Kadim, H.J.	TAA15-3
Iwata, Atsushi	TPB14-5	Kaiser, Andreas K.	MAA15-14
Izquierdo, Ebroul	WPA2-5	Kajitani, Yoji	WAA11-2
Izumi, Tomonori	WAA11-2	Kamada, Masaru	WPA1-2
J		Kambe, Takashi	WPA4-4
Jain, Vijay K.	WADE 2	 Kan, Kai Chiu 	TAA3-3
Jain, Vijay K. Jain, Vijay K.	WAB6-2 WPA1-7	Kanan, Riad	TAA14-2
Jakimoski, G.	TPB9-2	Kananen, Asko	WPA14-23
Jako, Z.	TAA5-1	Kanata, Yakichi	TPB3-2
Jako, Z.	TAA5-5	Kandlur, Dilip	WAA12-1
James, S.	WPA14-9	Kang, S.M.	WPA11-1
Jannesari, Saeid	MAA14-21	Kang, In	WPA15-3
Jen, Chein-Wei	WAA14-2	Kang, Sung Mo	MAA11-7
Jen, Steve	WPA11-7	Kang, Wei	WPA7-5
Jenkins, Kenneth	WAA1-3	Kanoun, Olfa	TPB15-3 MAA10-3
Jenn, David C.	TPB11-1	Kanpoor, Bhanu Kao, Hong-sing	MAA13-11
Jensen, H.T.	WAB7-2	Kao, Min-Chi	TAA1-4
Jeon, Hyunkyu	WPA1-6	Kao, Will-Cill Kapoor, Bhanu	MPA13-20
Jeong, Gab Joong	MPA14-5	Karafyllidis, I.	MPA14-9
Jeschke, Hartwig	TAA15-6	Karlsson, Magnus	MPA14-7
Jian, Ming	WAA1-1	Karsilayan, Aydin I.	MAA15-10
Jian, Ming	WPA13-10	Karunaratne, P.	TPB2-5
Jiang, Hsin-Chin	MPA4-5	Kasnsara, M.	TAB14-10
Jiang, Hsin-Chin	MAA8-3	Kasthuri, P.	TAA11-5
Jiang, Hsin-Chin	TPB1-4	Katayama, Kousuke	TPB3-3
Jiang, Hsin-Chin	WAA14-21	Katsaggelos, A.K.	TPB2-5
Jiang, Yao-lin	TPB10-3	Kaufel, G.	TAA14-5
Jiao, LiCheng	WAA3-4	Kawahara, Shingo	TPB3-3
Jiao, LiCheng	WAA3-8	Kawakami, Hiroshi	TAA7-4
Jiao, LiCheng	WPA1-5	Kawamata, Masayuki	WAA13-7

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Kawata, Junji	MAA14-4	Kobyashi, Suguru	TAA15-14
Keady, Aidan	WPA10-1	Kocal, Osman H.	TPB1-2
Kelber, K.	TPB9-3	Kocarev, L.	TPB9-2
Kennedy, M.P.	TAA5-1	Koch, Christof	TPB15-11
Kennedy, M.P.	TAA5-5	Kogge, Peter	WPB13-1
Kennedy, Michael I		Kohler, K.	TAA14-5
Kennedy, Michael I		Koide, Tetsushi	WAB6-3
Kennings, Andrew		Kolhsberg, S.	TPB-15-10
Ker, Ming-Dou	TAA14-8	Koli, Kimmo J.	MAA13-19
Ker, Ming-Dou	TAA14-9	Koli, Kimmo J.	TAA8-6
Keramat, Mansour Keramat, Mansour	TAA12-3 TAA12-7	Koli, Kimmo J. Kolumban, G.	WPA8-1
Keramat, Mansour	WAA15-16	Kolumban, G.	TAA5-1 TAA5-5
Kerzar, Boris	MAA13-10 MAA13-12	Konatsu, Naohisa	MPA13-2
Khalil, Mohammad		Komiya, Kazumi	MPA13-2
Khellah, Muhamma		Komuro, Motomasa	
Khoo, I-Hung	MPA1-1	Konczylowska, A.	MAA9-1
Kielbasa, Richard	WAA15-16	Koneru, Satyaki	MPA15-7
Kielbasa, Richard	TAA12-3	Kornegay, Kevin T.	MPA15-14
Kielbasa, Richard	WAA15-1	Kostamovaara, J. T.	MAA13-20
Kim, Hong-Sun	MPA6-8	Kostamovaara, J. T.	MPA15-11
Kim, Beomsup	MPA9-3	Kostamovaara, J. T.	TPB15-2
Kim, Beomsup	TAA13-10	Kosunen, Marko	MAA13-19
Kim, Chan	WPB13-7	Kosunen, Marko	WPA8-1
Kim, Jae-Gon	TPB13-6	Kot, Alex C.	MAA5-1
Kim, Jae-Wan Kim		Kot, Alex C.	WAA1-1
Kim, Jong-il	TPB2-2	Kot, Alex C.	WPA13-10
Kim, Jong-Sun	MAA10-2	Kotropoulos, C.	MAA4-6
Kim, Jongwon Kim, Kyung-Hoon	WAA4-6 TPB4-2	Koufopavlou, Odyss Koufopavlou, O.	seas MAA6-4 MAA10-8
Kim, Leesup	TPB4-2	Koufopavlou, O. Koufopavlou, O.	WAA15-18
Kim, Leesup	WAA14-7	Kouropaviou, O. Kousaka, Takuji	TAA7-4
Kim, Leesup	WPA1-6	Koutsoyannopoulos	
Kim, Seung P.	MPA13-24	Kouwenhoven, Micl	
Kim, Soo-Won	TAA10-2	Kozicki, M.	MPA3-2
Kim, Soo-Won	TAA10-2	Kranz, Ernst-Georg	WPA6-1
Kim, SooWon	TPB13-1	Krishnamachari, B.	TAA2-3
Kim, SungNam	TPB13-1	Krishnapura, Nagen	dra MPA8-6
Kim, Wonchan	MPA14-10	Krishnapura, N.	MPA15-16
Kim, YoungWoo	TPB13-1	Krishnapura, Nagen	
Kimijima, Tadaaki	TAA13-8	Kuh, Anthony	TAA3-1
Kimijima, Tadaaki	TAA13-8	Kuh, Ernest S.	MPA10-3
Kinoshita, Kazuhik		Kukk, Vello	WPA12-7
Kirac, Ahmet	TAA1-7	Kunieda, Nobuyuki	TPB13-7
Kis, G. Kis, G.	TAA5-1 TAA5-5	Kunieda, Nobuyuki Kunt, Murat	WAA14-21 WPA2-4
Kis, G. Kitajima, Hideo	TAB13-12	Kun, CC. Jay	MAA4-8
Kitajima, Hideo	WPA14-24	Kuo, CC. Jay	WPB13-9
Kitaoka, Yoshihiro	WPA13-2	Kuo, CC. Jay	WAA4-6
Kiya, Hitoshi	MPA1-6	Kuo, Tzu-Chieh	MPA14-2
Kiya, Hitoshi	TAA13-8	Kurokawa, Hiroaki	TAA3-4
Kleine, Ulrich	WAA15-5	Kurths, J.	WAA10-8
Kliemann, Wolfgan		Kwak, Jinsuk	MPA13-23
Klumperink, Eric A		Kwan, Louis C.Y.	TPB6-2
Klumperink, Eric A	.M. TAA8-3	Kwon, Jay	WPA11-7
Kneip, T.	TPB15-10	Kwon, Taeck-Geun	WPB13-6
Ko, Tsz-Mei	MPA4-1	Kyriakis-Bitzaros, E	
Ko, Tsz-Mei	WPB13-12	Kyung, Chong-Min	MAA10-2
Kobayashi, Keiichi	TPB11-3	L	
Kobayashi, Masaki	TAA13-3	Lahti, Jukka A.	MAA13-18

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Lai, Hon Seng	MPA13-16	Li, Dongju	WAA14-21
Lai, Hon Seng	TPB13-3	Li, Hongzhi	MAA4-3
Lai, Wai Kuen	MAA1-3	Li, S.	MAA1-4
Lai, Yen-Tai	WAA14-3	Li, S.	MAA5-1
Lai, Yung-Kai	MAA4-8	Li, S.	MAA5-8
Lai-Man, Po	MPA13-4	Li, S.	MPA8-4
Lam, Chi-Wai	WPB13-12	Li, S.	MPA10-1
Lam, Kenneth	MPA4-7	Li, S.	WAA12-5
Lampinen, Harri	MPA14-24	Li, S.	TPB2-3
Lancaster, Jason	MAA15-23	Li, S.	WAA11-1
Lande, Tor Sverre	MAA12-2	Li, S.	WAA13-2
Lang, Mathias	WAA13-4	Li, Simon	MAA14-7
Lao, Z.	TAA14-5	Li, Simon	WPA15-12
Lapic, Stephan	WAA5-1	Li, Tong	MPA14-6
Lapinoja, Mikko	WPA9-6	Li, Tong	WPA11-1
Larcheveque, R.	WAA15-15	Li, Tong	WPA11-1
Larson, Larry	WPA5-8	li, Weiping	MAA4-4
Lau, W.H.	TAA2-7	Li, Wenzhe	MPA13-22
Laur, Rainer A.	TPB10-4	Li, Xiaowei	WPA6-4
Lavoie, Pierre	WAA14-17	Liao, Xiaofeng	MPA14-20
Lazzaroni, M.	TAB14-8	Liao, Xiaofeng	MPA14-21
Le-Ngoc, Tho	TPB13-9	Liao, Xiaofeng	WPA14-13
Leblebici, Yusuf	WPA14-6	Lidgey, F.J.	WAA8-7
Lee, Chang-Hyeon		Lidgey, F.J.	WPA8-8
Lee, Chen-Yi	WAA14-24	Lienhart, H.	TAA14-5
Lee, Chew Peng	WPA15-24	Lim, Drahoslav	WPA3-1
Lee, Dae-Hyun	MAA10-2	Lim, Kyoohyun	MPA9-3
Lee, Edward K.	MPA15-7	Lim, Shao-Jen	MPA15-23
Lee, Eel-wan	TPB14-2	Lim, Yong-Ching	TAA1-8
Lee, Haeng Woo	TPB1-1	Lim, Yong-Ching	WAA13-2
Lee, Jeongho	MPA14-10	Lim, Young-kwon	MPA13-23
Lee, Jin Aeon	WAA14-7	Lim,, Yong-Ching	MAA2-7
Lee, Jong-Yeol	MAA10-2	Lin, Chi-Hung	WAA8-4
Lee, Jun-yong	WPB4-2	Lin, Chun-Fu	TAB13-6
Lee, Junsoo	MAA10-5	Lin, David W.	MPA13-7
Lee, Kok Kiong	WPB4-1	Lin, Horng-dar	WAA12-2
Lee, KyouHo	WPB13-7	Lin, Hung-Jen	WPA6-7
Lee, Mankoo	WAA6-2	Lin, Kuang	MPA13-22
Lee, Mankoo	WAA6-4	Lin, Kuang	WAB6-2
Lee, Sang-Ho	TPB6-3	Lin, Kuang	WPA15-12
Lee, Seokjun	TAA4-6	Linares-barranco, B	
Lee, Seong-Bong	TAA15-9	Linares-barranco, B	
Lee, Sook-Hyang	WPB13-6	Lindfors, Saska J.	MPA6-3
Lee, Wai	MAA3-8	Lindfors, Saska J.	MPA15-18
Lee, Wai	WPA5-7	Lindgren, Per	TAA15-15
Lee, Yew-San	WAA14-24	Ling, Fan	MAA4-4
Lee, Yong H.	TAA13-10	Liou, M.L.	WAA12-6 TPB5-3
Lee, Yong-Hoon	MAA10-2	Liou, Ming L.	
Leelavattananon, K Leenaerts, D.M.		Litmanen, Petteri Liu, Bin-Da	MAA13-6
Lemonds, Carl	MAA14-8 WPA13-1	Liu, Bin-Da Liu, Bin-Da	WPA14-17
		Liu, Chi-Min	WPA14-20 MPA13 10
Leong, Choon Haw	/ MPA8-2 TPB5-1		MPA13-19
Lepley, Bernard LeRiguer, Eric	MPA14-13	Liu, Der-Zheng Liu, Derong	MPA5-2
Leng, B.		Liu, Derong Liu, Jun J.	WPA14-12 MPA12-2
Leung, B.	WAA11-1 WAB7-1	Liu, Jun J. Liu, K.J.Ray	MPA12-2 MPA13-10
Leung, Bosco	MAA13-17	Liu, K.J.Kay Liu, Shih-Chii	MPA3-3
Leung, David	MAA13-17 MAA13-2	Liu, Wei-Lung	WAA13-16
Lewis, Stephen H.	MAA8-5	Liu, Wei-Lung Liu, Wentai	WAA14-20
Leyn, F.	MAA9-6	Liu, Wentai Liu, Zemin	MAA1-7
L. y II , 1 .	1417477-0	Liu, Zeillili	141/1/11-/

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	SESSIONS WDA1 3	NAMES SESSIONS
Liu, Zemin	WPA1-3	Manetti, Stefano MAA9-3
Liu, Zemin	WPB13-4	Manganaro, Gabriele MAA15-3
Liu, Zemin	WPB13-8	Manjunath, B.S. WAA12-4
Llinas, James	MPA11-1	Manku, Tajinder MAA13-10
Lo, Chun-Keung	MAA12-1	Mansoori, Sana A. TAA1-1
Lockwood, John	MAA11-7	Mar, D.J. WAA10-2
Lojacono, Roberto	WAA14-6	Mariscotti, Andrea MAA14-16
Lopez, Antonio	TPB4-1	Mariscotti, Andrea MPA12-3
Louis, Loai	TAA10-8	Marjanovic, Slavoljub MPA7-7
Loumeau, P.	WAA15-2	Marschner, Uwe WPA6-1
Low, Seo-How	MAA2-7	Martin Phillip WPA7-2
Lu, C.	WAA13-15	Martinez-Olalla, Rafael TAA13-5 Martinez-Salamero, L. TAA2-8
Lu, Jianhua	TPB5-3 MPA2-2	
Lu, WS.	WPA14-12	_
Lu, WS.	MAA2-3	Martins, Jorge M. TPB14-1 Marvasti, Farokh A. MPA13-18
Lu, WS. Lu, WS.	MAA14-14	Marvasti, Farokh A. TAA4-3
Lu, WS. Lu, WS.	MPA1-5	Marvasti, Farokh A. TPB13-4
Lu, Wu-sheng	WAA5-3	Mascolo, Saverio MAA7-6
Lubkin, J.	MPA3-9	Masselos, K. TAA15-18
Lucarelli, Gabriele	WPA14-7	Mathew, Sanu MPA14-19
Lucke, Lori E.	WPA15-4	Mathis, Wolfgang MPA7-5
Lucke, Lori E.	MAA10-5	Mathis, Wolfgang MPA15-5
Luh, Louis	WPA10-3	Matsumoto, Hiroki WPA13-2
Lun, Pak-Kong	TAB13-5	Matsushita, Takanori MAA7-1
Luong, Howard C.	MAA8-4	Maundy, Brent MAA15-4
Luong, Howard C.	MAA13-2	Mayaram, Kartikeya MAA13-4
Lutovac, Miroslav E		Mayaram, Kartikeya WPA11-2
Lyden, Colin	WPA10-1	Mayer, Michael WPA11-5
Lynch, William	TPB13-9	Maziarz, Bogdan M. WPA1-7
Lynden, C.	TPB15-12	Mazzini, G. TAA5-8
M		McClellan, Kelly MPA15-12
	MDA5 1	— McEachen, John MAA11-1
Ma, Chor Tin	MPA5-1	Mecocci, O. TPB13-8
Ma, Jun	TAB13-10	Medeiros, Manoel F. TAB14-6
Ma, Stanley	TAA10-3	Mehrez, Habib WPA14-8
Ma, Xiang Ying Maaz, Mohamad B.	TAA15-12 WPA4-3	Melnikov, G. TPB2-5
MacEachern, Leona		Meng, Teresa H. WPA5-5
Maclean, B.	MPA3-5	Meng, Teresa H. WAA4-8
Maeda, Yutaka	TPB3-2	Merakos, Panagiotis TAA15-18
Maggio, Gian Mario		Merched, Ricardo TAA13-1
Magotra, Neeraj	TAA11-5	Messina, A.R. TAB14-7
Magrath, Anthony J.		Miao, Guoqing TPB14-11
Magrath, Anthony J.		Michaelis, Markus WAA2-7
Maier, Christoph H.	WPA11-5	Micheli, Giovanni D. MAA6-2
Maio, I.	MAA14-23	Midwood, Sean MPA11-3
Maio, Ivan A.	MPA7-6	Mikhael, Wasfy B. WAA1-2
Mak, Chi	TAB14-2	Mikkelsen, Sindre MAA12-2
Makynen, Anssi J.	TPB15-2	Milanovic, Veljko MAA13-5
Malassiotis, Sotiris	WPA2-7	Miller, Michael TAA15-8
Malavasi, Enrico	TAA12-8	Miller, Neil L. MPA14-18
Malcovati, Piero	TPB15-5	Miller, W.C. MPA3-5
Malik, Jitendra	WPA2-8	Millerioux, Gilles TPB9-1
Maloberti, Franco	MAA8-6	Milor, Linda WPA6-7
Maloberti, Franco	TAB13-2	Min, Byung-Moo TAA10-2 Min, Byung-Moo TAA10-2
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Malvar, H.	MPA2-1	Minch, Bradley A. MAA15-16 Minch, Bradley A. MPA3-1
Manaresi, Nicolo'	WAA3-6	Minch, Bradley A. MPA3-1 Minch, Bradley A. MPA8-3
Manduchi, Roberto	WAA2-3	Minch, Bradley A. MPA8-3 Minch, Bradley A. TAA14-6
Manetakis, Kostas	TAA8-1	Milen, Diadicy A. 1AA14-0

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Minch, Bradley A. Minch, Bradley A.		Muneyasu, Mitsuji MPA1-7 Muneyasu, Mitsuji WPA14-19
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Mirzai, Bahram	WPA3-6	
Mitra, Sanjit K.	MAA4-7	N
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Mitra, Sanjit K.	WAA9-1	Nagalla, Radhakrishna TAA15-13
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Miyanaga, oshikaz	u WAA14-13	Nahm, Seunghyeon MAA13-13
Miyashita, Takumi	WPA10-2	Nahm, Seunghyeon WAA14-15
Mlynski, Dieter A.	WAA11-6	Naiknaware, R. TAA10-6 Naiknaware, R. WPA10-6
Mo, Yanshu	MAA2-3	Nakaguchi, Toshiya TAA7-7
Mohan, Rakesh	WAA12-5	Nakamura, Shogo WPA14-18
Moiola, Jorge L.	WPA7-1	Nakanishi, Isao TAA13-3
Mojarradi, Moham		Nakashi, Kenichi MPA14-14
Mok, Wai Hung	MPA13-12	Nakayama, Yoshikatsu WAB6-3
Mokhtari, Mehran	MAA13-3	Nakhai, Mohammad R. TAA4-3
Mokhtari, Mehran	MAA13-12	Nakhla, Michel MPA10-1
Mokhtari, Mehran	MPA14-11	Nakhla, Michel MPA10-2
Mokunaka, Naoki	MPA12-1	Nallaperumal, V. MPA12-2
Mokwa, W.	TPB15-10	Narayanan, H. MPA10-5
Moniri, Mansour	MAA15-23	Nathan, Arokia WPA11-4
Moniri, Mansour	WAA13-24	Nathan, Arokia WPA11-6
Moniri, Mansour	TPB14-3	Nava, Luis M. WPA14-1
Moniri, Mansour	WAA15-6	Navas-Gonzalez, R. MPA3-7
Monteiro, Fabrice Monteiro, Jose C.	TPB5-1	Nazzaro, Antonio WPA14-14
Monti, Antonello	MAA6-5 TAB14-8	Neag, Marius TPB12-4
Moon, Gyu	MPA6-8	Neff, Joseph D. TPB7-3
Moore, Michael S.		Neinhaus, H. MAA11-3
Moreira, Jose P.	MPA8-7	Netto, Sergio L. WAA13-3
Moreno, W.	MAA11-3	Neves, Jose L. WAA6-1
Mori, Hiroyuki	MPA12-4	Neves, Rui F. WAA9-2
Mori, Hiroyuki	MPA12-7	Newcomb, Robert MAA3-4
Mori, Hiroyuki	WAA7-2	Newcomb, Robert WPA14-2
Mori, Shinsaku	MAA14-5	Newcomb, Robert WPA14-2
Mori, Shinsaku	TPB7-1	Ng, A.E. MAA15-6
Morie, Takashi	TPB14-5	Ng, A.E. MAA15-24
Moro, Seiichiro	MAA14-5	Ng, A.E. MPA14-23
Moro, Seiichiro	TPB7-1	Ng, Shek-Wai TPB10-1
Morris, Tonia G	WPA14-16	Ng, T.S. WPA13-8
Moschetti, F.	TPB13-8	Ng, Tung Sang WAA5-2
Moschytz, George	S. MAA15-1	Ng, Tung Sang WAA5-5
Moschytz, George		Ngoya, E. WAA15-15
Moschytz, George	S. TAA13-2	Nguyen, Truong Q. MAA2-2 Nguyen, Truong Q. MAA4-1
Moschytz, George	S. WPA3-1	
Moschytz, George	S. WPA3-5	Nguyen, Truong Q. MPA2-8 Niamat, Mohammed Y. MPA1-2
Moschytz, George		Nicol, Chris J. TAA14-4
Moshnyaga, Vasily		Nicoletti, Guy M. WPA3-4
Mota, Antonio	MAA6-5	Niemisto, Matti MAA13-18
Moulin, Pierre	MPA2-3	Nieto-Lluis, Victor TAA13-5
Mourad, Samiha	TAA15-22	Nihei, Mizuhisa WPA10-2
Mu, Fenghao	WAA6-3	Nijhuis, Jos WAA14-18
Mu, Z.	MPA10-4	Nikolaidis, Spyridon MAA6-4
Mueller, Karsten	WPA2-5	Nikolaidis, Spyridon WAA15-23
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Nishihara, Akinori	WAA13-11	Pai, M.A.	MPA12-6
Nishikawa, Kiyoshi	TAA13-8	Palà-Schönwälder, Per	re TAA7-3
Nishimura, Shotaro	TPB1-4	Pallas, O.	TAA2-8
Nishio, Yoshifumi	MAA7-2	Palmisano, Giuseppe	WPA15-17
Nishio, Yoshifumi	MAA14-4	Palmisano, S.	MPA15-20
Nishio, Yoshifumi	WAA15-3	Palmisano, S.	WAA8-6
Nishio, Yoshifumi	WAA15-19	Palojärvi, Pasi	MPA15-11
Njoelstad, Tormod	MPA14-3	Palumbo, G.	WAA8-6
Noceti Filho, Sidnei	WPA15-14	Palumbo, G.	MPA15-20
Nofal, Mostafa	WPB13-13	Pammu, Sridhar	WPA14-21
Nosratinia, Aria	MPA2-4	Panagiotaras, George	MAA10-8
Nossek, Josef A.	WPA13-6	Pao, I-Ming	WAA4-4
Nowotny, Ulrich	TAA14-5	Papadakis, Vasilios	TPB13-9
Nowrouzian, Behrouz	WAA13-9	Papananos, Yannis	TAA12-6
Nowrouzian, Behrouz	WAA13-10	Papathanasiou, K.	MPA15-13
0		Papavassiliou, Christo	s TAA8-1
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O'Donnell, John	WAA14-5	Parhi, Keshab K.	TAB13-10
O'Dwyer, Tom	WAA14-5	Parhi, Keshab K.	WAA13-1
Obote, Shigeki	MAA13-15	Parhi, Keshab K.	WAA14-4
Obote, Shigeki	MAA13-23 TPB9-4	Parhi, Keshab K.	WAA14-11
Ogorzalek, M.	TAA13-12	Parhi, Keshab K.	WAA14-16
Ogunfunmi, Tokunbo Ohkubo, Jun'ya	WAA14-13	Parisi, Raffaele	WPA14-7
Ohm, Jens-Rainer	WPA2-5	Park, Byeoung-ha	MAA13-22
Ohmacht, Martin	MAA11-5	Park, Chan-Hong	MPA9-3
Ohmura, Michiroh	TAA15-17	Park, Joonbae	MPA14-10
Ohno, Wataru	MAA14-11	Park, Kyu-Ho	MAA10-2
Ohtsuka, Yasuhiro	TPB15-8	Park, Sangbeom	MAA8-1
Okazaki, Hideaki	MAA7-8	Park, Sanggyu	MPA13-23
Okazaki, Hideaki	WPB13-10	Park, Sung M.	TAA8-4
Okello, James Okello	TAA13-3	Park, Yoondong	MPA4-4
Oklobdzija, Vojin G.	MAA12-6	Parlitz, U.	TPB9-2
Oklobdzija, Vojin G.	WAB6-1	Parssinen, Aarno T.	MPA6-3
Okuda, Masahiro	WAA13-5	Parssinen, Aarno T.	MPA15-18
Oliaei, Omid	MPA15-22	Passos, Nelson L.	TAA15-4
Oliveira, Arlindo L.	MAA6-5	Passos, Nelson L.	WAA11-8
Olmos, Alfredo	WPA10-2	Pastore, Stefano	TAA7-1
Olmos, Alfredo	WPA15-2	Pavan, Shanthi	MPA15-16
Ono, Toshio	WPA15-18	Pavan, Shanthi	WPA15-9
Ookawara, Tsuyoshi	TAA7-8	Payne, Alison J.	WAA8-2
Opal, Ajoy	TAA12-5	Payne, Alison J.	TAA9-3
Opal, Ajoy	WAA15-7	Pearlman, William	MPA2-5
Orailoglu, Alex	TAA14-1	Pecora, L.M.	WAA10-2
Oraintara, Soontorn	MAA2-2	Pecora, L.M.	WAA10-3
Orchard, Michael	WAA4-1	Pei, Soo-chang	TPB5-4
Orcioni, Simone	WPA9-2	Pellegrini, Aurelio	MPA15-15
Orlandi, Gianni	WPA14-7	Peng, Zhishi	MAA4-2
Osa, Juan I.	TAA14-7	Pennala, Riku	MPA15-11
Osipov, G.	WAA10-8	Pennisi, Salvo	WAA8-6
Osman, Ashraf A.	WPA11-2	Perez-Castellanos, M Perona, Pietro	
Ostermann, Joern	TPB2-1		WAA2-3
Oten, Remzi	MAA14-19	Perona, Pietro	WPA2-3
Ozgur, Mehmet	MAA13-5	Pessina, G.	TAA14-10
P		 Petraglia, Antonio Petraglia, Antonio 	WAA9-1 WAA9-8
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Paasio, Ari	WPA14-23	Petrides, Keliapious	WPA15-5
Pace, P.E. Pace, P.E.	TAA14-11 TPB14-7	Petrie, Craig S.	TAA14-3
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Pham, Hoan H.	WPA11-6	Ramirez-Angulo, Jaime TPB4-1
Phang, Khoman	TAA8-8	Ramirez-Angulo, JaimeWAA14-14
Philip, Serge	TPB5-1	Ramirez-Angulo, JaimeWPA15-22
Piazza, Francesco	MPA5-4	Ramkumar, M. MPA2-6
Piazza, Francesco	TAA3-2	Ramos, Rafael TAA2-4
Piccirilli, M.C.	MAA9-3	Ramprasad, Sumant MAA6-1
Picun, Gonzalo F.	MPA15-21	Ramstad, Tor A. WPA1-4
Piedade, Moisés	MAA15-19	Rancoita, P.G. TAA14-10
Pihl, Johnny Pimentel, Max C.	MAA12-3 TAB14-6	Ranganathan, N. MAA11-3 Ranganathan, N. MPA13-17
Pineda, Jose	MAA13-8	Ranganathan, N. MPA13-17 Ranganathan, Nagarajan MAA5-4
Pineda, Jose Pineda de Gyvez, J		Rapakko, Harri TAA10-1
Pinto, Rodrigo Lui		Rashid, Obaidur M. TAA15-4
Pirsch, Peter	MAA11-5	Ratakonda, Krishna MPA4-3
Pissolato, José	TAB14-4	Re. Marco WAA14-6
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Pitas, Ioannis	MAA4-6	Reddy, Hari C. MPA1-1
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Plett, Calvin	TPB14-10	Reina, Rodrigo WPA15-2
Plotkin, Eugene I.	MAA1-2	Reissig, Gunther MAA14-9
Po, Lai-Man	MPA13-4	Reiszig, Gunther MPA7-8
Po, Lai-Man	WAA4-7	Renfors, Markku MAA2-8
Poor, H.V.	WPA5-3	Renfors, Markku MAA2-8
Poor, H.V.	WAA5-6	Rhee, Woogeun MPA6-6
Porra, Veikko	TAA5-4	Rho, June-Kyung WPB13-6
Porta, S.	TAA14-7	Ridha, Hamila MAA2-8
Porta, S.	WPA8-8	Rieder, Peter WPA13-6
Portela, Carlos	TAB14-4	Riley, Tom TPB14-10
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Premoli, Amedio	MAA14-23	Roberts, Gordon W. MPA8-2
Premoli, Amedio	TAA7-1	Roberts, Gordon W. TAA9-1
Premont, Christopl		Roberts, Gordon W. TAA9-1
Pu, Chiang-Jung	MPA15-2	Roberts, Gordon W. TAA10-8
Punzenberger, Mai	nfred TAA9-6	Roberts, Gordon W. WPA6-2
Python, Dominique	e MPA8-5	Roberts, Gordon W. WPA6-3
Q		Roche, Christian TAA1-6
Qin, Huashu	MAA14-6	- Rodellar-Biarge, M-V TAA13-5
Quddus, Azhar	MPA13-15	Rodriguez-Vazquez, A. MPA3-7
Ouer, Stefano	WAA15-13	Rodriguez-Vazquez, A. MAA9-5
Quero, Jose M.	MPA12-5	Rodriguez-Vazquez, A. TAA5-4
Quero, Jose Manue	el MPA12-5	Rogers, Alan R. MAA14-15
Quigley, Steven F.	MPA14-18	Rogers, Alan R. MAA14-15 Roman, Jaime R. WAA1-2
Quigley, Steven F.	WPA14-21	- Romero, A. TAA2-8
R		Roos, Janne MPA7-4
Raahemifar, K.	MPΔ15_//	Routama, Jarkko A. MPA9-2
Rabel, Claude Edd	MPA15-4 y TAB6-2	Routama, Jarkko A. MPA9-7
Rachid, Bouchakou		Rovatti, R. TAA5-8
Raffo, Luigi	WPA14-14	Rovatti, Riccardo WAA3-6
Ragaie, Hani F.	WPA12-2	Rumin, Nicholas C. MPA10-6
Rahkonen, Timo E		Ruotsalainen, Tarmo J. MPA15-11
Rahkonen, Timo E		Ruotsalainen, Tarmo J. TPB15-2
Rahkonen, Timo E		Rutledge, Janet TAA11-3
Rajan, P.K.	MPA1-1	Ryu, Chul MPA13-24
Ramachandran, Ka		Ryynanen, Jussi H. MPA6-3
Ramadoss, S.J.	MPA13-17	Ryynanen, Jussi H. MPA15-18
Rambhatla, Murthy		S
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Sanchez-Sinencio, Edgar MAA6-8 Serdijn, Wouter TAA9-8 Sanchez-Sinencio, Edgar WPA8-2 Serrano, Teresa WAA14-19 Sanchez-Solano, Santiago WPA8-3 Setti, G. TAA5-8 Sandage, Robert W. TPB15-9 Setti, G. TAA5-8 Sandberg, Irwin W. MAA14-18 Sewell, J.I. MAA15-24 Sandler, Mark B. TAA1-1 Sha, Edwin TAA15-21 Sandler, Mark B. TAA4-1 Sha, Edwin TAA15-21 Santos, Paulo J. TAA14-12 Shalfeev, Vladimir D WAA11-7 Saramaki, Tapio A. MAA2-8 Shaffeev, Vladimir D WAA10-7 Saramaki, Tapio A. WAA13-13 Shanfeev, Vladimir D WAA10-7 Saramaki, Tapio A. WAA13-13 Shanbhag, Naresh MAA10-1 Saramaki, Tapio A. WAA13-13 Shanbhag, Naresh MAA10-1 Saramaki, Tapio A. WAA13-12 Shanbhag, Naresh MAA10-1 Sasase, Iwao MAA1-5 Shanbhag, Naresh MAA10-1 Sasase, Iwao MAA1-15 Shanbhag, Naresh MAA10-1 Sasase, Iwa				
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Sandberg, Irwin W. MAA14-18 Sewell, J.I. MAA15-6 Sandler, Mark B. TPB10-2 Sewell, J.I. MAA15-21 Sandler, Mark B. TPB14-4 Sha, Edwin TAA14-18 Sansen, Willy MAA9-8 Sha, Edwin WAA11-8 Santos, Paulo J. TAA14-12 Shalash, Ahmed F. MPA5-7 Sapatnekar, Sachin S. WAA11-7 Shalfeev, Vladimir D WAA10-7 Saramaki, Tapio A. MAA2-8 Shansh, Ahmed F. MPA5-7 Saramaki, Tapio A. WAA13-13 Shanbhag, Naresh MAA6-1 Sarrinelli-Filho, Mario TBB11-4 Shanbhag, Naresh MAA6-1 Sarrinento-Reyes, A. WAA15-10 Shanbhag, Naresh TPB6-1 Sasase, Iwao MAA15-10 Sharaf, Atif I. TPB16-1 Sasase, Iwao MAA14-5 Sharaf, Atif I. TPB16-1 Savaria, Yvon WAA14-17 Sheig, Michael TAA15-21 Savaria, Yvon WAA15-10 Sheu, Bing WPA11-7 Schaumann, Rolf MAA9-7 Sheu, Bing J. MAA3-3				
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Schwarz, Wolfgang Schwarz, W. TPB9-3 Schwarz, W. Schwarz, W. WAA10-1 Schwarz, W. WAA10-1 Schwarz, Wolfgang Schwarz, Wolfgang MAA7-5 Schwarz, Wolfgang MAA7-5 Schwarz, Wolfgang MAA7-5 Schwarz, Wolfgang TAA7-5 Schwin, Tao TAA10-4 Schweizer, J. TAA5-3 Scinell, Svante WAA13-8 Sciuto, Donatella WAA14-8 Sciuto, Donatella WAA14-8 Sciut, Tom WPA9-7 Silva, Joao M. TAA15-23 Scutt, Tom W. WAA3-3 Scilva, Luis G. TAA15-23 Seara, Rui WPA15-14 Silva-Martinez, Jose MPA6-5 Sedaghat-Maman, Reza TAA15-2 Seifi, Abbas WAA15-17 Silva-Martinez, Jose TAA8-5				
Schwarz, W.TPB9-3Shue, BingWPA14-10Schwarz, W.WAA10-1Shue, Ming-HwaWPA1-3Schwarz, WolfgangMAA7-5Shui, PengLangWPA1-5Schwarz, WolfgangTAA7-5Shui, TaoTAA10-4Schweizer, J.TAA5-3Signell, SvanteWAA13-8Sciuto, DonatellaWAA14-8Silva, Christopher P.TAA5-9Scott, TomWPA9-7Silva, Joao M.TAA15-23Scutt, Tom W.WAA3-3Silva, Luis G.TAA15-23Seara, RuiWPA15-14Silva-Martinez, JoseMPA6-5Sedaghat-Maman, RezaTAA15-2Silva-Martinez, JoseMPA8-8Seifi, AbbasWAA15-17Silva-Martinez, JoseTAA8-5	,			
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Scutt, Tom W. WAA3-3 Silva, Luis G. TAA15-23 Seara, Rui WPA15-14 Silva-Martinez, Jose MPA6-5 Sedaghat-Maman, Reza TAA15-2 Silva-Martinez, Jose MPA8-8 Seifi, Abbas WAA15-17 Silva-Martinez, Jose TAA8-5				
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Seifi, Abbas WAA15-17 Silva-Martinez, Jose TAA8-5				
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	Sekiya, Hiroo MA	A14-5	Silva-Martínez, Jose	MAA15-12

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Silvano, Cristina	WAA14-8	Su, Yih-Ming	MAA3-7
Silveira, Fernando	MPA15-21	Su, Yih-Ming	TAA14-8
Silveira, Luis M.	TAA15-23	Su, Yih-Ming	WAA8-7
Silveira, Luis M.	VAA15-22	Suetsugu, Tadashi	TAA2-5
Simek, Petr	MAA15-13	Sultan, Labib	WAA3-5
Simoni, Mario F.	WAA3-2	Sumanen, Lauri	MAA13-19
Sin, Hyun Chul	WAA14-7	Sumi, Yasuaki	MAA13-23
Singh, Kanwar J.	TAA14-4	Sumi, Yasusaki	MAA13-15
Singh, P.	MAA11-3	Summerfield, Stephen	WAA13-15
Siohan, Pierre	TAA1-6	Sun, M.T.	WAA12-8
Siskos, S.	WPA15-5	Sun, M.T.	WAA4-4
Siu, Wan Chi	MAA4-5	Sun, Tao	TAA14-8
Siu, Wan-Chi	MAA1-4	Sun, Tao	TAA15-24
Siu, Wan-Chi	TAB13-5	Sun, Tao	TPB2-3
Smith, John	WAA12-5	Sun, Tao	TPB2-4
Snelgrove, Martin	TAA10-5	Sun, Tao	TPB14-9
Snelgrove, Martin	WPA10-5	Sun, Tao	WAB7-4
Snelgrove, Martin	WPA10-7	Sundararajan, Vijay	WAA14-11
So, Man F.	WPA13-3	Sundsbo, Ingil	WPA1-4
Sobelman, Gerald E.	MAA12-8	Sung, Wonyong	MAA13-13
Sobhy, Mohamed I.	WAA9-5	Sung, Wonyong	TAA4-6
Sobhy, Mohamed I.	WPA3-8	Sung, Wonyong	TAA15-20
Soeda, Junichiro	WPB13-11	Sung, Wonyong	WAA14-15
Sollander, Magnus	WAA13-8	Sunwoo, Myung H.	WAA14-9
Somerset, W.P.	VAA13-24	Sunwoo, Myung H.	WAA14-10
Sommer, Gerald	WAA2-7	Surma, David R.	WPB13-1
Sommer, Ralk	MAA9-7	Surma-aho, Kimmo	WAA13-12
Song, Hwangjun	WAA4-6	Surma-aho, Kimmo	WAA13-13
Song, Leilei	WAA14-4	Suszynski, Robert	TPB14-6
Song, Peter C.	WPA14-21	Suter, Bruce W.	MAA6-6
Song, Xudong	MPA13-9	Suter, Bruce W.	MAA6-6
Soni, R.A.	WAA1-5	Suvakovik, Dusan	MAA6-7
Soudris, D.	MPA14-9	Suyama, Ken	MAA13-9
Spaanenburg, Ben V	VAA14-18	Suyama, Ken	MPA15-10
Spagnuolo, G.	TAA2-6	Suyama, Ken	TPB7-4
Sreeram, V.	MPA1-4	Suyama, Ken	WAA9-4
Sridhar, Ramalingam	MPA14-19	Suykens, J.	WAA10-5
Sridharan, Sucheendran	WPA9-7	Suzuki, Jouji	TPB13-7
Sriram, Sundararanjan	TAA15-19	Suzuki, Jouji	WPA13-5
Srivastava, M.C.	MPA5-8	Suzuki, Kazuhiro	MPA4-8
Stanford, Theron	WAA3-1	Svensson, Christer	WAA6-3
Stanford, Theron	WPA15-13	Swahn, Thomas	MAA13-12
Steensgaard, Jesper M.	WAA9-6	Swamy, M.N.S.	MAA1-2
Steiner, Ralph	WPA11-5	Swamy, M.N.S.	MAA2-5
Stevens, Kenneth S.	MAA6-6	Swamy, M.N.S.	TAB13-3
Stevenson, Robert L.	MAA4-2	Swamy, M.N.S.	WAA4-2
Stievano, Igor S.	MPA7-6	Swaroop, B.	MPA3-2
Stojanovski, T.	TPB9-2	Swidzinski, Jan F.	TAA12-1
	TAA15-18	Syoubu, Kouichi	MAA13-15
Stoyanov, Georgi	WAA13-7	Syoubu, Kouichi	MAA13-23
Streitenberger, Martin	MPA15-5	Szabo, Adrian	TAB14-10
Streitenberger, Martin	MPA15-5	T	
Strintzis, Michael G.	WPA2-7	Takahashi, Atsushi	WAA11-2
Stubberud, Allen R.	MPA1-1	Takahashi, Kazuhiro	WAA11-4
Styblinski, Maciej A.	TAA12-1	Takatama, Hirokazu	MPA7-1
Styblinski, Maciej A.	TAA12-2	Takeuchi, Tomoaki	TAA1-2
Styblinsky, M.	MAA9-6	Takine, Tetsuya	WPB13-11
	TAA14-11	Talleux, Samuel	WAA2-5
Styer, D.	TPB14-7	Tamaru, Keikichi	MPA4-8
Stylianou, Ioannis G.	MAA1-1	Tan, Meng Tong	MPA15-19
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Tan, Meng Tong	MPA15-24	Trajkovic, Ljiljana	TPB10-2
Tan, Nianxiong	MAA8-7	Tran, Trac	MAA4-1
Tan, Nianxiong	MAA8-8	Treichler, John	WPA5-2
Tan, Nianxiong	MPA6-1	Trieu, H.K.	TPB15-10
Tan, Xiangdong	WAA15-12	Tröster, Gerhard	TAA13-4
Tanaka, Mamoru	TAA7-6	Tsai, Ching-Han	WPA11-1
Tang, Chi-wah	MPA13-8	Tsai, KC.	TAB6-3
Tang, Pushan	TPB14-11	Tsai, R.H.	MAA5-5
Tang, Pushan	WPA15-16	Tsai, R.H.	MPA3-4
Taniguchi, Kenji	MPA14-14	Tsai, Tsung-Han	MPA4-2
Tanji, Yuichi	WAA15-19	Tsai, Tsung-Han	WPA13-4
Tanskanen, Jarno M		Tsai, Tsung-Han	MPA13-21
Tao, Yufei	MAA15-18	Tsao, Ju-Ying	WPA14-20
Tarim, Tuna B.	WPA15-7	Tsao, Y.F.	TAA14-9
Tavares, Maria Cris		Tse, C.K.	WPA15-16
Tavares, Maria Cris		Tsekeridou, Sofia	MAA4-6
Tavsanoglu, Vedat	WAA2-5	Tseng, Yuh-Kuang	MAA12-5
Tavsanoglu, Vedat	WAA2-6	Tsividis, Yannis Tsividis, Yannis	MPA8-4
Tay, David B.	TAA1-5	,	MPA8-6
Taylor, John Taylor, John	MPA15-6 MPA15-8	Tsividis, Yannis Tsividis, Yannis	WAA9-4 WPA15-9
Teh, Kah Chan	MAA5-1	Tsubone, Tadashi	TAA7-5
Temes, Gabor C.	TPB14-9	Tsuchida, Kensei	TAA15-14
Temes, Gabor C.	WAB7-4	Tsui, Chi Ying	TPB6-2
Temes, Gabor C.	WPA9-3	Tsuji, Kohkichi	MAA14-10
Tenhunen, Hannu	MAA13-3	Tu, Steve Hung-Lun	
Tenhunen, Hannu	MAA13-12	Tufan, Emir	WAA2-5
Tenhunen, Hannu	MPA6-1	Tuijl, Ed J.M.	TAA8-3
Tenhunen, Hannu	MPA14-11	Tuqan, Jamal	MAA2-1
Tenhunen, Hannu	TPB14-8	Tuqan, Jamal	MPA2-7
Teo, Patrick	WAA2-4	Turchetti, C.	WPA9-2
TerHaseborg, H.s	WAA14-18	U	
Terry, John	WAA1-6		TIA A 71 4
Thaler, Markus	TAA13-4	Ueta, Tetsushi	TAA7-4
Thanachayanont, A	. WAA8-2	Unbehauen, Rolf Uncini, Aurelio	MPA13-22 TAA3-2
Thanailakis, A.	MPA14-9	Ushida, Akio	MAA7-2
Thoidis, I.	MPA14-9	Ushida, Akio	MAA14-4
Thiede, A.	TAA14-5	Ushida, Akio	WAA15-3
Tian, Michael W.	TAA12-4	Ushida, Akio	WAA15-19
To, Cheuk-Him	WPA15-19	Utkin, Victor	TPB11-2
Tochinai, Koji	WAA14-13	Uvacek, Bob	TAA11-7
Tokuda, Keiichi	TAA13-11	V	·
Tong, Yit Chow	MPA15-19		T + D < 1
Tong, Yit Chow Tongsima, Sissades	MPA15-19 WAA11-8	Vai, Mankuan M.	TAB6-1
Toral, Sergio L.	MPA12-5	Vaidyanathan, P.P.	MAA2-1
Torikai, H.	WAA10-1	Vaidyanathan, P.P.	MAA2-6 MPA2-7
Torikai, Hiroyuki	MAA7-1	Vaidyanathan, P.P. Vaidyanathan, P.P.	TAA1-7
Torralba, Antonio	WPB4-3	Valle, M.	MPA3-6
Toshine, Naoyoshi	WAB6-3	Valtonen, Martti	MPA7-4
Tosic, Dejan V.	WAA15-4	van der Woerd, Albe	
Totaro, Stefano	WPA2-9	Vandewalle, J.	TPB9-3
Toth, Laszlo	MPA8-6	Vandewalle, J.	WAA10-5
Toth, Laszlo	MPA15-10	Vankka, Jouko K.	MAA13-19
Toumazou, Chris	TAB8-1	Vannelli, Anthony	TAA15-16
Toumazou, Chris	TAA8-4	Vannelli, Anthony	WAA11-5
Toumazou, Chris	TAA9-3	Varho, Susanna	TAA4-2
Toumazou, Chris	WAA8-8	Vasilescu, G.	MAA9-4
Toumazou, Chris	WPA8-6	Veillette, Benoit R.	MAA15-20
Toumazou, Chris	WPA8-7	Venkatachalam, Vid	ya WPA1-1

rerhoeven, Chris J. ermeulen, Frederik erma, Jussi esterbacka, Mark MPA14-7 ettro, A. TPB2-4 idal-Verdu, F. MPA3-7 innakota, Bapi MAA10-5 itale, Robert L. IPB11-1 lassis, S. WPA15-5 Occa, G. TAA2-6 Wey, Chi Wey, Chi Wey, Chi Wey, Chi Oltz, Peter J. WaA5-8 Wey, Chi Outloz, Alexandre MAA5-6 Unitz, Peter J. WaA5-8 Wey, Chi Wisand, Wilsand, Wisand, Wilsand,	NIABATEG	GEGGIONG	NIANGE
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itale, Robert L. Iassis, S. Occa, G. TAA2-6 Wey, Chin-Long Witsea, Balan Witsea, Balan Wilson, Alan N. Wilson, Charles S Wing, Omar Wisland, Dag T. Wittenburg, Jens Wolf, Tod D. Wong, K.W. Wong, C.K. Wong, C.K. Wong, C.K. Wong, K.W. Wong, K.W. Wong, Martin Wong, Wartin Wong, Wartin Wong, Wartin Wong, Wartin Wong, Wartin Wong, Martin Wong, Martin Wong, Wartin Wong, Wartin Wong, Martin Wong, Wartin Wong, Wartin Wong, Wartin Wong, War	,		
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/eeks, Michael MAA11-8	• •		
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	<u>ESSIONS</u>	NAMES	SESSIONS
X		Yu, Baiying	WPA9-7
Xiong, Kaiqi	TAA7-2	Yu, Gwo-Jeng	WPA14-17
Xiong, Kaiqi Xiong, Zixiang	WAA4-1	Yu, Hongyi	MAA1-8
Xu, Gonggui	TAA12-2	Yu, Juebang	WPA14-13
	1 AA12-2	– Yu, Li	TAA10-5
Y		Yu, Pang-Cheng	TPB15-7
Yagyu, Mitsuhiko	WAA13-11	Yu, Qingjian	MPA10-3
Yamada, Akihiko	MPA1-6	Yu, Wei	MAA13-17
Yamagami, Yoshihiro	WAA15-3	Yu, Yizhou	WPA2-8
Yamaguchi, Masayuki	WPA4-4	Yu, Zhihong	TAA15-21
Yamai, Nariyoshi	WPB13-11	Yuan, Fei	WAA15-7
Yang, Andrew T.	MPA10-8	Yuihara, Atsushi	MPA12-7
Yang, Po-Hui	MPA14-1	Yund, William	TAA11-4
Yang, Rui	WAA13-2	Yung, H.C. Nelson	MPA13-12
Yang, Y.	MPA2-3	Yung, H.C. Nelson	MPA13-16
Yang, Y.	TAA11-5	Yung, H.C. Nelson	TPB13-3
Yang, Y.	TPB14-11	$\overline{\mathbf{Z}}$	
Yao, Minli	MAA5-7	Zaghloul, Mona	MAA3-4
Yasukawa, Hiroshi	TAA4-4	Zahradnik, Pavel	WAA13-14
Yau, Sze Fong	MPA5-1	Zan, Jinwen	WAA13-14 WAA4-2
Yau, Sze Fong	TAA13-7	Zemin, Liu	WPA14-15
Ye, Hua	WAA1-8	Zemin, Liu	WPB13-3
Yeh, Man-hung	TPB5-4	Zeng, Fan-Gang	WPA14-10
Yeng, Horng-Ru	TAA14-9	Zeng, Yan-Gang Zeng, Xuan	WPA15-16
Yeon, Kwang-Il	WPA15-3	Zerzghi, Amanuel	MPA1-3
Yeung, Tak Keung	TAA13-7	Zhang, Huaizhou	MAA14-6
Yin, Qinye	MAA5-7	Zhang, Huaizhou Zhang, Huaizhou	MPA13-4
Yin, Qinye	MAA5-8	Zhang, Liang	WPB13-8
Yli-Kaakinen, Juha	WAA13-13	Zhang, Qingwen	WAA1-2
Yokomaru, Toshihiko	WAA11-2	Zhang, Ya-Qin	WAA4-1
Yokoyama, Shuichi	MPA1-5	Zhang, Yanning	WPA14-3
Yoo, Jang-Sik	TAA10-2	Zhao, Min	WAA11-7
Yoo, Jea-Hoon	TPB6-4	Zhao, Willi Zhao, Qifang	WPA13-5
Yoo, Jeang-Ju	TPB6-4	Zhao, Qhang Zheng, Wei Xing	MAA1-6
Yoon, Hyun-Dhong	MAA10-2	Zheng, Wei Xing	TAA13-6
Yoshizawa, Hiroyasu	MPA14-14	Zhou, Kemin	WPA7-2
Yoshizawa, Takashi	TPB11-3	Zhu, Wei-Ping	MAA2-5
Youn, J.	WAA12-8	Zhu, Wei-Ping	WAA4-2
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Young, Albert M.	MAA3-8	Zhu, Wei-Ping	WPA14-18

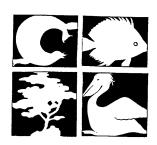


1998 IEEE International Symposium on CIRCUITS AND SYSTEMS



May 31 - June 3, 1998 Monterey, California http://www.iscas.nps.navy.mil





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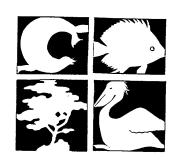


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June 22-24, 1998, Hotel Palace, Lucerne, Switzerland

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